AN EXPERIMENTAL STUDY OF THE SOCIOLOGICAL AND PSYCHOLOGICAL FACTORS UNDERLYING INTER-PERSONAL RELATIONSHIP AMONG PUPILS DURING LATER ADOLESCENT PERIOD

(15+ to 18+)

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PREFACE

This is an attempt to study an aspect of interpersonal relationship -- the relationship between twos. The main aim of the present work is to investigate the factors underlying the pairing of friends during later adolescence. The knowledge of such factors, it is fancied, will enable us to understand, diagnose, and tackle the behavioural problems in schools and colleges.

Besides, the introduction, importance, definition and review of other studies in the field, the investigation proper has been dealt with, under five sections viz., first, the factors working in the boys' group; second, the factors working in the grils' group; third, a comparison of the two groups; fourth, a study of a few cases; and fifth, a factorial study of the variables involved. The fifth and the last chapter of the present work deals with results, discussion, educational implications and a few suggestions for further researches.

One important thing in the title of the thesis that needs to be clarified is that the term 'Experimental' has been used here in a general scientific sense and not in the strictly specific sense of a research design. The study may, therefore, be taken in that light only.

My grateful thanks are due to all the principals, teachers and students who have been helpful and generous to me in completing the field work. Acknowledgements are also due to the Bureau of

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have been an impossibility.

(Sudha Malhotra)

<u>Explanation of the Main Technical Terms alongwith their Equivalents,</u>

<u>if any, as They Occur in this Thesis.</u>

<u>Socio-psychological terms.--</u>

1. Mutually attracted friends - termed as pairs, positive relations, paired friends.

2. Strong pairs -

    (i) The only name described throughout as a response to the questionnaire;

    (ii) First choice.

   Weak pairs -

    (i) Second and Third choice;

    (ii) The preferences divided into other figures in the class also.

3. Socio-economic status - derivation of

    (i) Vocational status (vocation or occupation of the guardian).

    (ii) Economic status (Income level of the guardian).

    (iii) Caste status.

4. Language - derivation of

    (i) Mothertongue (M.T.).

    (ii) Languages of communication or expression (L.C.).

5. Culture and living habits - denote cultural taste and mode of living of the adolescent.

6. Proximity - derivation of

    (i) Family friendship (ff).

    (ii) Classfellowship (cf).

7. Physical appearance and other contributing factors - include ten factors, enumerated by the pupils themselves, responsible for

their friendships.

   (i) Positive behaviour pattern meaning 'nice behaviour', 'disciplined', 'mannerly', 'helpful', etc.

   (ii) Studies and intellectual qualities- are the enumerations like 'good at studies', 'writes poems, good essays', 'studius', etc.

 (iii) Proximity - enumerated by the students themselves, have been separately dealt with and it denotes 'nearness of residence', 'same muhalla', 'same village', 'a distant relation', 'going to cinema together', etc.

  (iv) Similarities - enumeration of students, as 'similar nature', 'similar habits', 'similar economic conditions', 'similar school achievements', etc.

   (v) Mutual relations - stand for the responses like 'mutual help in studies', 'mutual exchange of books', 'mutual help in solving problems', etc.

  (vi) Sports - are the enumerating of the students regarding the sport activities of their friends.

 (vii) Assertive qualities - are the qualities which are assertive assertive in nature, e.g., 'bold', 'brave', 'having leader-ship qualities', etc.

(viii) Submissive qualities - are the qualities which are submis-sive in character, e.g., 'humble', 'modest', 'obedient', etc.

  (ix) Negative behaviour pattern - includes the enumerations like - 'mischief making', 'teasing', 'telling lies', etc.

   (x) Physical appearance - denotes the description of the friends' looks, physical built, dress appearance or say an overall appearance etc.

8. Interests - include

   (i) likes; (ii) dislikes.

9. Mental ability is

   (i) school achievement; (ii) Intelligence quotient.

10. Extraversion-introversion - denote only the trends of these
    tendencies in the two friends.

11. Psychological needs - are the inner drives of the adolescents.

12. Sentiments - denote only the trends of the emotional associations.

13. Depressive state - also denotes the trend of this state.

14. Anxiety state - trend has been taken into consideration.

Statistical terms:-

(1) 'S' - is the symbol used in this study for 'similarity percentages'.

(2) 'D' - is the symbol for 'dissimilarity percentages'.

(3) 'X^2' - is the symbol for chi-square which is a measure of
    divergence from null hypothesis. In this study, the hypothesis
    is tested for 'S' and 'D' both. If 'S' is greater 'D' is the
    null hypothesis and if 'D' is greater 'S' is greater the null
    hypothesis.

(4) 'df' - is the symbol for 'degrees of freedom' which equals N
    minus the number of parameters already estimated from the
    sample. But it is not always (N-1). For evaluating X^2,
    df = (r-1)(c-1) while 'r' stands for number of rows and 'c'
    stands for number of columns. Sometimes df denoted as 'n'.

(5) 'CR' - is critical ratio have been computed

   (i) for finding out the significance of certain factors where
       X^2 is not applicable.

   (ii) for finding out the significance of difference between the
        two means of similarity percentages among the two groups
        of boys and girls pairs.

(6) ' σ ' - denotes standard deviation - a stable index of variability.

(7) ' σ_D' - is the symbol for standard error of difference between two means.

(8) ' $\sigma_{D\%}$' - is the symbol for standard error of difference between two percentages.

(9) 'p' - is the symbol used for a proportion.

(10) ' σ_p' - is the standard error of a proportion.

(11) 'M_o' - is the mean observed.

(12) ' σ_{M_o}' - is the standard error of mean observed.

(13) 'M_e' - is the mean expected.

(14) ' σ_{M_e}' - is the standard error of mean expected.

(15) 'C' - is for co-efficient of contingency - a measure of correlation when each of the two variables under study has been classified into two or more categories.

(16) ' r_t ' - stands for tetrachoric correlation and has been computed where 'C' is not used.

CHAPTER I

MEANING, NATURE AND SIGNIFICANCE OF INTERPERSONAL
RELATIONSHIP.

From time immemorial human curiosity has been peeping into the realm of human self -- its behaviour and relationships. Philosophers, politicians, sociologists, scientists and psychologists -- all have tried and are still trying to probe into the most significant fact regarding human being -- his behaviour as an individual unit and as a social entity.

Psychologists in particular have studied human nature in its process of action and reaction to the everchanging environment. This has been clarified by Edwin G. Boring[1] in his definition of psychology which says that "Psychology is the study of human nature. It is the study of man, man as a living being, acting in the everchanging world, responding to things and events and other people." Thus psychology studies a human being in various aspects as an individual unit. It is 'the science of behaviour' -- behaviour in relation to physical as well as social-cultural environment. Behaviour in relation to physical world covers the areas

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[1] Edwin G. Boring, "The Nature of Psychology", Foundations of Psychology, Edwin G. Boring, Herbart Sidney Langfeld, Harry Porter Weld, Editors, John Wiley and Sons, Inc., New York, Chapman and Hall Ltd., London, 1955, p. 1.

of discussion on vision, smell, hearing, taste, thinking and images, etc., and behaviour in social-cultural reference embraces all the investigations into the acceptances and rejections between persons and groups. Therefore, a study of human beings can be classified under various categories, viz., general psychology, industrial psychology, child psychology, educational psychology, abnormal psychology and social psychology etc. These fields of psychology cover different aspects of study of an individual. And when the individual is studied in reference to his social relations -- social action and interaction, it pertains to a special branch of psychology -- called social psychology.

Social psychology.-- Social psychology is the science which deals with the various relationships between man and his social and cultural environment. In the words of Gordon W. Allport,[1] "Its focus of interest is upon the social nature of the individual person. By contrast, political science, sociology, and cultural anthropology take as their starting points the political, social, or cultural systems in which an individual person lives." It is, therefore, the study of human behaviour in relation to his social surroundings. The human feelings, thoughts, action and reaction to the social-cultural environment are a few of the areas of

[1] Gordon W. Allport, "The Historical Background of Modern Social Psychology", Handbook of Social Psychology Vol. I, Gardner Lindzey, Editor, Addison-Wesley Publishing Company, Inc., Cambridge 42, Mass, 1956, pp. 4-5.

social psychology. It deals with man in relation to his group -- large or small.

Social psychology does not restrict itself only to the study of individuals within groups, but it also concerns itself with the study of the whole groups. That is, it studies the individual in social interaction within the group i.e., the study of intra-group relations, and it also concentrates on the inter-group relations. Hence, in the words of E.G. Boring,[1] social psychology is "....... the study of the individual in the groups and the relations of groups to one another." Thus, social psychology studies firstly, an individual in relation to another individual, secondly, an individual in relation to his group, and thirdly, group in relation to another group. Kimball Young[2] has also categorised interest of social psychology broadly into these three types of interactional relationships viz., (i) Person to person; (ii) Person to group; and (iii) Group to group. These can be explained further in the following way:-

(i) Person to person relationship may be called 'Interpersonal relations'. Here a limited number of individuals are involved in direct face-to-face relationships. These individuals percieve each other as a social stimulus and action and interaction thus follows. The relationships are studied between

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1/ E.G. Boring, Herbert Sidney Langfeld, Harry Porter Weld, op. cit., p. 13.

2/ Kimball Young, Handbook of Social Psychology, Routledge & Kegan Paul Ltd., Broadway House, 68-74 Carter Lane, London, E.C. 4, 1960, p. 1.

individuals within a group. These relations have been termed
as 'Primary Social Relations'.[1]

(ii) The second type of relationship is 'person to group'
relationship. In this relationship, there is some group with
which an individual identifies himself. This identification
prepares the values and patterns of life for an individual
member. An individual will definitely behave, think and feel
according to the norms or values[2] of the group to which he
or she belongs. According to Kimball Young, this relationship
is more conscious and deliberate in contrast to interpersonal
relations, as it requires a persistent effort on the part of
the member to conform to the requirements of the group.

(iii) The third basic relationship includes 'Group to
group' relations. The group may be viewed as one single unit
and the single units act and react upon each other. This may
be termed as 'inter-group relationship'.

In brief, the whole human community is made up of many
such groups, acting and reacting upon one another, and again,
each of these groups consists of individuals in inter-personal
relations. Hence, instead of making three basic categories of
inter-actional relations, we can have mainly two -- viz., the
'group to group' relations and the relations within the groups,

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[1] Boring, Langfeld and Weld, Op. Cit., p. 589.

[2] ".....norms represent standardised generalisations
concerning expected modes of behavior in any matter of
consequence to the group......... Therefore, norms denote
expected behavior, or even ideal behavior". (Sherif &
Sherif, An Outline of Social Psychology, 1956, p. 170).

that is the 'person to person' relations.

The Groups

"A group is a social unit which consists of a number of
individuals who stand in (more or less) definite status and
role relationships to one another and which possesses a set
of values and norms of its own regulating the behavior of
individual members, at least in matters of consequence to
the group,"[1] as Sherif defines it. The definition mainly
emphasises that a group is 'a social unit' in which the
members are playing their roles according to their individual
status in conformity with the set norms or standards of that
particular group. It is formed only when reciprocities are
established among the individual members according to the
set standards or values. Negatively defining, a group is not
a togetherness situation, which is though a social unit, has
no reciprocity among the individual members. It is not merely
an aggregate of individuals but an association of persons --
on 'give - and - take' policy with certain set values.

Groups may be broadly categorised into two types --
(1) Informal, (2) Formal.

The informal groups are characterised by face-to-face
relationship among the members. Generally, they are small

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[1] Muzafer Sherif and Carolyn W. Sherif, An Outline of Social
    Psychology, (Revised Edition), Harper and Brothers, New
    York, 1956, p. 144.

groups and might be (or might not be) a part of a larger formally organised social unit. For instance, youth gangs are informal types of groups, but at the same time they might or might not work in conformity with a larger organisation like scouts association. The cliques, friendships or gangs are informal groups in which the relationship is firstly face-to-face or a direct one, secondly, the role relationship is flexible. Therefore, second characteristic of informal groups is its flexibility of role expectations. But on the other hand, in formal groups there might or might not be direct relationship among the members and secondly, the role expectation is stable, and rigid. Apart from these characteristics a group may be both formal and informal, as a larger formal group might be consisting of many informal groups but an informal group will definitely not embrace a formal group, rather might work for it as an integral part.

However, Kimball Young has made a classification of groups according to various findings of different psychologists as follows:-

(a) Primary groups (findings of H. Cooley) are "characterised by intimate face-to-face contacts, direct interaction, covers a wide range of needs and gratifications, and has a common locus,[1] e.g., family, playgroup, and neighbourhood etc.

(b) Secondary groups may easily be "characterised by much

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[1] Kimball Young, Op. cit., p. 220.

more deliberate and conscious choice,"[1] e.g., an international scientific association or various kinds of political and economic associations.

Again, the primary and secondary groups both may be classified in terms of persistence and permanance.

/(c) Kimball Young further makes a division with regard to inter-group relations viz., in-group and out-group. The in-group is the association in which the members feel highly identified with the group. There is a "we feeling" in the members of the association. They are loyal, sympathetic and cooperative. It may be either of primary or of secondary type. Out-group is just the reverse of in-group. The out-group, or others' group is the association of individuals to whom we do not show an attitude of loyalty, cooperation or mutual aid. It is, thus, characterised by a feeling of dislike, opposition, avoidance, fear and aggression.

(d) Community is another form of human groupings. It is defined as "...... a congregate of people of all ages and both sexes having more or less common culture and living within a restricted geographical locality."[2]

(e) Class-structure is the stratification of hierarchical power distributed in various sub-groups. These sub-groups may differ in number from country to country, and from time to time.

Wattenberg[3] in his book "The Adolescent Years" with

1/ Ibid., p. 222.
2/ Ibid., p. 224.
3/ W.W. Wattenberg, The Adolescent years, Harcourt, Brace and Company, New York, 1955, pp. 211-215.

special reference to adolescence and pre-adolescence stage has categorised the types of power groups as given below:-

a) Friendships.-- The smallest of all peer groups, is the pairing of the two -- the best friends. The friends are likely to be similar to each other in personality and temperament.

b) Informal play groups.-- The most frequent of these types of groups are found during pre-adolescence.

c) Organised youth groups.-- These are the groups which are organised under the supervision of adult members who are also the leaders of their respective groups, e.g., Scouts.

d) Gangs.-- They are developed outside the supervision of adults. The gangs have typical pattern of pastimers.

e) Secret clubs.-- The formal organisation of gangs. They have secret names, passwords, constitution and rituals etc.

Taking above classifications of groups in view, we find that the nature of the grouping is affected by the developmental stages of human life. That is, the classification as well as constitution of the groups do not differ only in reference to permanance, size and purpose, but also according to the age levels of the constituting members. The changing importance of the aims and objectives of life, with the advancing age, leads to identification of an individual with different associations or groups characteristic of that age level. Thus, the membership of various age groups depends on the satisfaction of these needs which have different colouring at different stages of life (the childhood, the adolescence and the adulthood).

Hence, the groups exist and are bound to exist, as long as the human life exists, though their shape, form and constitution may differ from time to time and from country to country. Within these groups individuals have inter-relations to one another, leading us to another concept -- the concept of inter-personal relationship.

Inter-personal Relationships

The meaning and types of inter-personal relations.-- The term 'inter-personal relations' was first introduced by an American psychiatrist Harry Stack Sullivan. Fritz Heider[1] in his "The Psychology of Inter-personal Relations" has defined it as denoting relations between 'few', usually between 'two' people. It signifies relationship among different persons in a group. It is a 'person-to-person' relationship. It may appear between two persons or more. It may include the friendly as well as unfriendly relations.

T. Leary[2] has defined inter-personal behavior as a "Behavior which is related overtly, consciously, ethically, or symbolically to another human being (real, collective, or imagined) is inter-personal". When the personal characteristics are interpreted in social terms, that is, when they reflect themselves in relation to others, the non-interpersonal reactions become inter-personal. 'A says, that he is depressed'--

1/ Fritz Heider, The Psychology of Inter-personal Relations, John Wiley & Sons, Inc., New York, Chapman & Hall, Ltd., London, 1958, p. 1.
2/ Timothy Leary, Inter-personal Diagnosis of Personality, The Ronald Press Co., New York, 1957, p. 4.

the characteristic is non-inter-personal, as it described 'A' in isolation. When we say 'A' is indifferent to his father, it tells us 'A's' feelings related to his father. Thus the behaviour related to another individual is inter-personal behaviour.

A group of workers[1] have investigated the inter-personal relations with a contention that the personality can be studied by studying and measuring various relationships that the individual has. They have introduced the term 'Inter-personal mechanisms' defined as inter-personal functions, of a unit of social behaviour.

Kretch and Crutchfield in the "Theory and Problems of Social Psychology", have discussed the individual roles within the group. They say that in informal groups the interpersonal relations depend more on the individual characters. According to these authors, the groups are made up of many sub-groups, and these sub-groups are constituted of smaller ones, such as groups of twos. These groups of twos are based on many different kinds of inter-personal relations. "These include such things as feelings of friendship, love, admiration, respect, identification, loyalty, cooperation as well as dislike, hatred, sadism, masochism, dominance, submission, rivalry and just sheer indifference."[2]

[1] L.P. Thorpe, Personality - An Inter-disciplinary Approach, D. Van Nostrand Company, Inc., Princeton, New Jersey, Toronto, London, New York, 1958, pp. 278-279.

[2] David Kretch and Richard S. Crutchfield, Theory and Problems of Social Psychology, McGraw Hill Book Company, Inc., New York, Toronto, London, 1948, p. 375.

Thus we find, that, the 'interpersonal relations' are the relations among different individuals within a group, mostly in twos. It is a two-way relationship.

This can be explained further by taking an example. Suppose, there is a group of five individuals -- A, B, C, D, and E. 'A' likes 'B' but 'B' is friendly with 'C' and 'C' reciprocates the feelings of 'B' likes 'D', is friendly with 'A' and dislikes 'E'. 'E' on the other hand likes to be alone, while 'B' is liked by all of them and hence he is called the leader of the whole group. This shows a characteristic pattern of inter-personal relationship in the group.

Therefore, the interpersonal relations may be of many types. The inter-personal relations generally shown by adolescents have been described by Kretch and Crutchfield as (1) pairs, (2) triangles, (3) interlocking net-works, (4) chains, (5) stars, (6) isolates, etc.

(2) The basis of interpersonal relationships.-- The interpersonal relations may be due to gregarious instinct, instinct of submission, instinct of self-assertion, etc., etc. McDougall's instinct theory says that a person becomes a member of the group due to gregarious instinct present in him. Thus, instincts might be the source or origin of the social memberships but still the basis of the web of interpersonal relations (attractions and repulsions) remains unexplored. Apart from the instincts, there are some other factors which determine his or her behaviour within the group. But Sherif[1] is

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1/ Muzafer Sherif & Carolyn W. Sherif, Op. Cit., p. 152.

not in favour of instincts as the basis of social interaction. The informal interaction of individuals, he says, is due to some common motives and goals, which cover the range of human needs, desires, interests and aspirations etc. If it is our basic urge to be a member of a group, large or small, then why all the members of that group do not become friendly to one another. Why 'A' likes to be with 'D' rather than 'B'. This shows that there are some other factors which underlie these mutual likes and dislikes.

Sigmund Freud[1]/ in his book 'Group Psychology and the Analysis of the Ego' talks of being in love and hypnosis which itself is a type of positive interpersonal relations. The hypnotist, he says, is in the place of ego ideal. Hypnosis can very easily, he says, discover the 'libidinal constitution' of groups. In his own words, "A primary group of this kind is a number of individuals who have substituted one and the same object for their ego-ideal and have consequently identified themselves with one another in their ego". He represents it graphically as given here.

EGO IDEAL   EGO   OBJECT   OUTER OBJECT
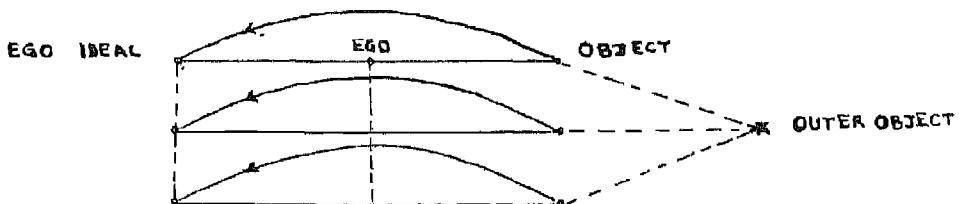
1/ Sigmund Freud, Group Psychology and the Analysis of the Ego, (Fifth impression), James Strachey, Translator, The Hograrth Press, 42 William IV Street, W.C. 2 and The Institute of Psycho-Analysis, 1949, pp. 77-80.

Malm and Jamison[1] in their book 'Adolescence' write that the mutual friendships are formed between the adolescents having similar socio-economic background, but at the same time, there are more complex aspects of personality and conduct responsible for such mutual friendships.

Hence we can classify the bases of interpersonal relations into two broad categories: (1) sociological factors, and (2) psychological factors.

1. The interpersonal relationships are affected by sociological factors, which include the culture, traditions, religion, economic status, languages etc. (Malm and Jamison). We can say, that people of similar language and culture tend to attract each other when placed in a heterogeneous group in reference to culture and language.

2. The psychological factors like, intelligence, interests psychological needs, sentiments, attitudes, prejudices, values and many others also affect the interpersonal relations. It may be hypothised that two individuals possessing similarity of psychological characteristics are likely to be attracted to each other.

Importance of study of interpersonal relations.-- The study of interpersonal relations -- the patterns, the factors and bases are of immense importance especially for educators and parents when they are faced with the problem of education and socialisation of the child. Teachers and parents are to

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[1] Marguerite Malm and Olis G. Jamison, Adolescence, (First edition), McGraw-Hill Book Company, Inc., New York, Toronto, London, 1952, pp. 115-130.

see that the child becomes a suitable member of a club, or
association or of society at large.

Since the environment of home and school plays an impor-
tant role in the development of social interests and activities,
-- the social awareness of a person, the teachers and parents
must understand their responsibilities towards the social deve-
lopment of an individual. For such an understanding one must
be aware of the dominating factors responsible for the social
development of a person. With the help of such knowledge, the
teachers in the schools can very well develop the social aware-
ness in the students in a more effective manner because of
'hero-worship' tendency among adolescents. Flaming[1] also
stresses this, point while saying that "Through a fuller know-
ledge of this processes involved in inter-relationships
within groups it may become possible to understand more fully
the relation of man to man and to permit free growth of social
participation not by attempting tuition or instruction from
without (with its resulting stimulation of negative reactions)
but by removing the barriers which, by their frustrating
effects, limit the possibility of healthy personal and social
maturing."

- and girls gradually develop social feelings while
working or playing, and by studying friendships we can easily
understand their hopes and fears, conflicts, interests, needs

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[1] C.M. Flaming, Adolescence: Its Social Psychology, Routledge
and Kegan Paul Ltd., Broadway House, 68-74 Carter Lane E.C.
4, 1951, p. 169.

and inclinations which contribute to their complex social naturations. That is, by studying the factors that are responsible for friendship groups, we can have relevant discussions on the problems of school organisation, mental hygiene and group and individual activities.

The work of Toronto Groups, (Northway, Frankel, and Potashin), shows that "isolated children tend to remain isolated if no measures are taken on their behalf, but that many of them can be helped towards more secure positions in their groups."[1]

Kuhlen and Bretsch[2] have found out that the unaccepted children, in general, have some physical or emotional problems. These problems may be very well dealt with, by recognizing the group situations to which these children belong. In a study of such children Mc Clelland and Ratcliff[3] could improve the cohesion of a class of a junior high school children by giving specific jobs to the isolates, and by bringing them into prominance.

Sometimes we are faced with some 'problem children' in schools and colleges. Such adolescents ought to be given guidance and be psychologically treated. For giving them any psychological advice or treatment the psychologists or psychiatrist must know his or her interests, fears, anxieties, and behaviour and attitude towards others i.e., his or her interpersonal relations.

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[1] J.E. Richardson, "Group Relations and Education", pp. 24-25, Studies in Social Psychology, C.M. Fleming, Editor, Rouledge and Kegan Paul Ltd., London, 1951.

[2] Ibid., p. 25.

[3] Ibid., p. 25.

Without understanding the interpersonal relations, the psychi-
atrist cannot help the individual. Therefore, an investigation
into the interpersonal relations is very essential for making
a healthy atmosphere in schools and colleges.

A. Schnurmann[1] studied two cases of extreme friendships
among children and expressed that there are dangers on both
submissive and on aggressive sides. The submissive one will
never use her initiative in any organisation and her talents
cannot be used for the benefit of an organisation of a greater
circle. On the other hand, the aggressive one may feel lost and
miserable and will not be able to use her capacities to fuller
extent whenever she loses the friend. Thus this sadistic type
of friendship will bring maladjustment -- the personality may
remain lopsided. The normal friendships are of permanent type
but the sadistic type of friendships are of temporary nature.

Taking the above in view, such studies should be done
at every stage when the physical, social and intellectual
interests change, because with these changes the organisation
of groupings also change and unless we know the changing basis
of the groupings we cannot get effective results in educating
our children. Specially during adolescence, which is charac-
terized by rapid changes in over-all interests, such precau-
tionary measures ought to be taken, because, if they are not
guided properly at this stage, they may go on wrong lines and

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1/ A. Schnurmann, "A special case of Friendship between Two
children", The New Era (May, 1946), 27: 125.

spoil their social and intellectual life.

To summarise, the social, personal or emotional adjustment or say any kind of adjustment is wholly based on the interpersonal experiences from the very childhood of ones life. These past experiences express themselves in the activities of later life. At the school, college and university stage the child goes on experiencing such relations which colour his or her personality as a whole, and it then affects the further interpersonal relations in the situation, thus the chain of action and interaction continues. That is, the unsatisfactory interpersonal relations make the basis for maladjustments, neuroses, psychoses and delinquent efforts.

<u>Scope of the study of interpersonal relations.</u>-- Thus, the study of interpersonal relations, though under the domain of social psychology -- a branch of psychology, covers a wide area in the studies of educational psychology also, more so, when we have to understand the factual details of interpersonal relations in reference to child guidance in home, community, schools and colleges. By studying the interpersonal relations, we can study as to how a child resists, fits, and adjusts to his environment and the knowledge of it can very easily help us in formulating a plan for school organisation.

The understanding of interpersonal relations has its clinical implications too. All the diagnoses of neurotic cases are based on the understanding of their interpersonal relations. Unless these relations are known or unless the whole case history of a patient is known to the psychiatrist,

the diagnosis is not only difficult, but impossible. There-
fore, the study of interpersonal relations is most important
when dealing with a pathological case. Thus the study of inter-
personal relations belongs to a majority of branches of
psychology.

Interpersonal relations cover a wide range of studies.
These relations may have many dimensions and the dimensions
may vary according to the layers, the human personality
possesses. The layers might be grouped broadly into conscious,
subconscious and unconscious. Interpersonal relations are
related to all the states of mind, they may exist only in
thoughts and feelings or in actions and reactions -- overtly
or covertly. These interpersonal relations may remain only
in the dreams and imaginations or may be expressed in art and
literature, or may find direct expression from individual to
individual through action and reaction. All these forms of
behaviour can be put under the study of interpersonal rela-
tions. When such explorations are related to direct and con-
sciously perceived relations, they give us the data on the
'surface' level only. But going deep into the 'unconscious
imaginary unfathomable fancies' may be termed as 'depth
analysis'. Thus, the study of interpersonal relations or
behaviours may be attempted along these two lines.

The phenomenon of interpersonal relations remains
unexplored unless we understand the 'dynamism' of group
behaviour, that is the 'action and interaction' of different
individuals. And, the study of 'dynamism' of interpersonal
relations is incomplete unless we know the bases of these
relations.

CHAPTER II

REVIEW OF THE RESEARCHES DONE ON INTERPERSONAL RELATIONS

In this chapter an attempt has been made to review the
work that has been done in the area of inter-personal rela-
tions. America and England are the pioneers in this field.
India is still at the start. Group formation, group behaviour,
leaders have been the main targets of studies, but not much
work has been done particularly on inter-personal relations.
The area has been approached from clinical angle by H.S.
Sullivan (1947)[1] who developed the theory of personality
given by Freud, by explaining mental health and illness as
the expressions of sound and unsound "interpersonal relations",
and emphasised that the "paratactic" processes are due to
social rejection of the self, leading to a disturbed perception
of self to society. Karen Horney[2] also emphasizes, while
developing her "Characterological approach to personality",
that the neuroses are generated due to disturbances in human
relationships. E. Fromm[3] also, is of opinion that it is the

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1/ Gardner Murphy, "Social Motivation", Handbook of Social
    Psychology, Gardner Lindzey, Editor, Addison- Wesley
    Publishing Company, Inc., Cambridge 42, Mass, 1956, p. 621.

2/ T. Leary, Interpersonal Diagnosis of Personality, The
    Ronald Press Co., New York, 1957, p. 4.

3/ Ibid., pp. 7-8.

human relations which determine the course of personality
development.

Apart from these approaches some experimental work has
been done to study the positive and negative relations and
their sociological and psychological bases at different age
levels. Only the studies relevant to the scope of the problem
in hand have been reviewed. Conclusions of each study have
been described in the following pages, so that a comparison
can be made towards the end of the thesis, between the results
of the present study and others in the field.

Raymond B. Cattell[1] (University of London, 1934),
studied "Friends and Enemies -- a psychological study of
character and temprament". The method of study was the
administration of Temperament Test II with an aim to study
the 'General Temperament' and 'General will Character'. The
main emphasis, it seems, was given to temperament and
character in relation to popularity and unpopularity.

The conclusions are: "The most popular person will have
moderately high surgency, very high will-character and very
low perseveration. The most unpopular person will have high
surgency, very low will-character and very high persevera-
tion."[2] The study was mainly, concentrated to the 'will-
character' and 'temperament' and no other factor or basis
was taken into account, though both the positive relations
and negative relations (enemies) were studied.

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[1] R.B. Cattell, "Friends and Enemies: A Psychological Study
of Character and Temperament", Character and Personality
(September 1934), 3: 54-63.

[2] Ibid., p. 63.

A study of College friendships was made by Francis M. Vreeland and Stephen M. Corey.[1] The sample consisted of 30 pairs of the same sex. The aim was to determine as to whether the traits constitute some determining factors for the formation of friendships or not. The scope of the study is limited, as compared to the previous study by Cattell, who has taken both the positive as well as negative relations, while Vreeland and Corey have concentrated on the positive relation only.

Vreeland and Corey selected five psychological tests viz., "Thurstone Personality Schedule", "Thurstone Psychological Examination for College Students", "Drobas' Attitude Towards War scale", "Moss' Social Intelligence Examination", and "Watson's Test of Public Opinion on Some Religious and Economic Issues". The method adopted is very much similar to that of Cattell's. Freshmen were excluded and the paired friends were studied with the following results:-

(1) The part played by intelligence in the formation of friendship is said to be hazardous when compared to general body of the Depauw students.

(2) The intimate friends are slightly superior than the general body of students as a whole in academic grades.

(3) The parents of the friends are engaged in the same vocation. The income similarity of the parents is not evident.

(4) The neurotic personality has few friends of the opposite sex, and it is because of the shyness they possess. The paired friends have the same amount of neurotism but the

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[1] Francis M. Vreeland and Stephen M. Corey, "A Study of College Friendships", Journal of Abnormal and Social Psychology, (1935-'36), 30: 229-236.

instability may be in different directions.

(5) The intimate friends are similar in their 'Social Intelligence'.

(6) Attitude towards war and peace is found to be an irrelevant factor in the selection of friends.

The study seems to supplement the friendship basis results of those found out by Cattell, who had studied only the "temperament" and "General will characters", while Vreeland and Corey have discovered many other bases of friendships.

Richardson, Forester, Shukla and Higginbotham[1] (University of London, 1948-'51), picked up a problem, similar to the previous study done by Vreeland and Corey. They also studied the positive interpersonal relations i.e., "Friendship", the subjects being 252 in number with age ranging from 11 + to 14 +. In both the studies, emphasis is on 'traits' of the friends. The method for investigation was the administration of a questionnaire, interviewing important cases and asking the subjects to write an essay on 'My best friend'. A list of twelve geographical projects was organised and the subjects were allowed to group accordingly. The method of study differs from that adopted by Vreeland and Corey, who selected five psychological tests while Shukla and others confined the method to questionnaire and interview only.

It is concluded that --

(1) Boys and girls are not significantly different in sociability.

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[1] Richardson, Forester, Shukla, Higginbotham, "A Study of Friendship", Chapter IX, Studies in the Social Psychology of Adolescence, C.M. Fleming, Editor, Routledge & Kegan Paul Ltd., Broadway House, Center Lane, London, 1951.

(2) Selection of friends is related to the satisfaction of psychological needs as revealed by the choices of the group as a whole and the intersex choices.

(3) Both boys and girls tend to group on unisexual basis and the relationship with the opposite sex is unstable.

(4) The sociograms reveal the presence of complete isolates, pairs, chains, and triangles and the popular children serve as interlinks of two groups and the triangles and pairs remain isolates from the larger groups.

(5) Girls seem to be more homogeneous than boys.

(6) The reciprocation on ten criteria i.e., "Companionships" "Same interest", "Intimacy", "Practical ability", "Sympathy", "Adventure", "Security and protection", "Sociability", "Sportsmanship" are relevant and significant.

(7) Membership of the same church and Sunday School plays an insignificant role and the common interests are out-door games, general reading and filmseeing.

(8) Neighbourhood plays an important part.

(9) I.Q. does not play any definite part among boys, but it is highly significant among girls. This particular conclusion is in sight conflict with that drawn by Vreeland and Corey (page 2⊄) when he says that part played by intelligence is hazardous, when the friends are compared to the general body of the class.

(10) Boys merely mention physical appearance in their essays on "My best friend" but the girls mention this too, along with other characteristics.

Texas State College), studied "Friendship Choice in College
in Relation to Church Affiliation, In Church Preferences,
Family size and Length of Enrolment in College". The study
takes a step forward, and limits a definite area with the
'Church affiliation', 'family size', and 'College enrolement'.
A slightly vague approach adopted in the previous studies has
been avoided and a definite area of the problem is stressed.

However, the method is slightly identical with that
adopted by Vreeland and Corey (page 2½). He asked the subjects
to rate their best friend on a three page personality inven-
tory, and to give the name of a second best friend also. Thus,
he adopted both the techniques of analysis - sociometric and
psychological.

The conclusions drawn are supplementary to the findings
of the previous researches. The results are:-

(1) The six churches studied do not show any reliable
advantage over the other in developing individuals who are
of 'Winning friends kind'.

(2) The students not aligned to any church receive
friendship choices beyond chance expectancy.

(3) All the churches except Christian, show in-group
preferences. The Baptist church shows the least preferences
for out-group choices.

(4) The students not belonging to any church show high
degree of in-group preferences.

(5) The family size does not show any reliable advantage
over another in friendship choices.

(6) The number of choices received does not go with the

length of time in school, except extreme groups.

John E. Horrocks and Mae E. Buker[1] in 1951, worked on "Friendship fluctuations of pre-adolescents". The aim and the age group both slightly deviate from the previous studies discussed.

Sociometric method was adopted and the subjects were asked to choose three best friends, and two weeks after, the same test was repeated on the same subjects.

They arrived at the conclusion, that, there is no relationship between a person's friendship fluctuation and his acceptance by the group. There is greater stability in friendship with increasing chronological age. We do not find any contradiction here too. It is again an additional finding in this particular field. On the other hand, we find a step forward to the 'Dynamism of interpersonal relations', which was not attempted in the previous studies discussed in this chapter.

John G. Darley, Neal Gross and William F. Martin, (University of Minnesota, Harvard University, University of Illinois)[2] in 1951 carried out the "Studies of Group Behaviour: Stability, Change, and Inter-relations of Psychometric and Sociometric Variables."

The method was further improved by collecting the psychometric, sociometric, and autobiographical data. The sample

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1/ John E. Horrocks and Mae E. Buker, "A Study of Friendship Fluctuations of Pre-adolescents", The Journal of Genetic Psychology (1951), 78: 131-144.

2/ John G. Darley, Neal Gross, and William F. Martin, "Studies of Group Behaviour: Stability, Change and Inter-relations of Psychometric and Sociometric Variables", Journal of Abnormal and Social Psychology (1951), 46: 565-576.

consisted of 138 college women, residing in thirteen 'house resident units' of a University Cooperative Housing Project in the University of Minnesota.

The conclusions are:—

(1) There is no selective and assortative grouping in all the thirteen houses on the factors - 'Father's occupation', 'Socio-economic status of the home', and 'Strength of identification with "middle class" attitude and 'value system'. So far as the factor 'Father's occupation' is concerned, it is in contradiction with the findings of Vreeland and Corey, that the parents of the friends are engaged in the same vocation. For the income similarity data, they do not get any definite results.

(2) There is evidence of assortative and selective grouping on 'Minnesota Personality Scale' at the start of the year but by the end of the year, in all the thirteen houses, individual changes occurred in the 'direction of creating homogeneity of variance'.

(3) The score on 'Satisfaction with village life' using as a dependent variable, relationship is found with (a) 'higher proportions of membership carrying over from previous years'; (b) 'low proportions of migration from the residence units during the year'; (c) 'higher amounts of paired choices in certain sociometric relations'; (d) 'higher ratios of in-group to out-group choices by the end of the year'.

Onas C. Sandrette,[1] of Wheaton College, Wheaton (Illinois) studied "Social Distance and Degree of Acquaintance" with an

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[1] Onas C. Sandrette, "Social Distance and Degree of Acquaintance", _Journal of Educational Research_, (January, 1958), 51: 367.

object to determine the effect of various degrees of acquaint-
anceship upon friendship choice.

The 'Acquaintanceship Scale' and 'Social Distance Scale'
were used as testing measures.

It was concluded that the "Stronger degree of acquaintance-
ship will increase an individual's chances of being chosen as a
friend if he has socially acceptable personality traits. Conver-
sely, if an individual has undesirable personality traits, his
chances of being chosen as a friend are probably decreased by a
closer degree of acquaintanceship". This conclusion is very much
in conformity with the investigations of Austin and Thompson,
who found out the bases of selection and rejection as the posi-
tive and negative traits (page 24). Though traits were empha-
sised by Vreeland and Corey (page 21) as well as by Sandrette,
as determining factors for the formation of friendships, yet
the results they got, are supplementary rather than similar.
The two research conclusions seem to supplement the results
rather than contradicting or repeating them.

Mary St. Anne Reilly, William D. Commins, and Edward C.
Stefic,[1] (Catholic University of America, 1959-'60), made a
study on "The Complementarity of Personality Needs in Friend-
ship Choice". The project slightly deviates from the work done
previously. The previous researches were either mainly on
finding out the 'similarity' or the 'effect' of certain factors.
There was no attempt made to study the 'Complementarity' during

[1] Mary St. Anne Reilly, William D. Commins, and Edward C.
Stefic, "The Complementarity of Personality Needs in
Friendship Choice", Journal of Abnormal and Social
Psychology (1960), 61: 290-294.

adolescence or pre-adolescence. This particular work confines itself only to the 'Complementarity' of the 'personality needs' whereas the previous ones were wider in range of the factors responsible for the friendships. Thus, a new trend steps in the field of researches on interpersonal relations.

The sample consisted of 25 junior pairs and 25 sophomore pairs (total number of subjects being 100) matched randomly and forming thereby a contrasting group of non-friends. The instruments used were (1) Edward Personal Preference Schedule and, (2) Allport Vernon Study of Values.

The conclusions are:-

(1) There is no complementary relationship in regard to self perceived personality needs of friends, and mutual need satisfaction also, is not evident.

(2) Friends do not tend to see themselves and their friends as complementary rather than similar.

(3) There is no conclusive evidence of similarity of needs of friends.

(4) Friends tend to be similar in 'values'.

A study conducted on inter-group-relations in Ceylon by T.L. Green,[1] is reported in "Education and Psychology". The problem was to study the relations between Ceylon's sub-cultural groups -- 'Unity', 'Anmity' or 'Conflict', how these relations come about and what can be done to improve them. The work

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[1] T.L. Green, "Studies of Inter-group-Relations in Ceylon", Education and Psychology (1954), pp. 27-35.

is mainly concerned with group-interaction rather than inter-personal relation. But, the study throws light on inter-personal relations rather than inter-group relations. The methods used, included 'observation', 'analysis of written material', 'Social Distance Scale', 'Sociometric Technique' and 'Social Concepts Tests', etc.

The results are, that the 'race' and 'religion-language complex' affect interpersonal relations. The inter-personal tensions can be reduced. The vocational attitudes are related to certain aspects of inter-group relations.

In India experimental work on groupings starts in 1952.

K.P. Chowdhari[1]/ (1952) studied the 'Linguistic Groupings' in Delhi Multilingual Schools.

The sample consisted of 326 (174 boys and 152 girls) students. The subjects were asked to choose 30 friends from among his or her school fellows in 10 different situations (3 in each). There was no bar in choosing the same friends for different situations.

It is concluded that:

(1) The disintegrated group tries to cling to the group with highest social status, and is poorly reciprocated and becomes unpopular with other groups.

(2) Large group alien to the culture of the religion and other large groups not enjoying high status are worst placed for inter-linguistic friendship.

1/ K.P. Chowdhari, "Friendship between Language Groups in Delhi Multilingual Schools", Reprint from the Indian Journal of Educational Research, (March, 1952).

(3) In case of Bengalies, though a large group, does not reject the small groups in the school.

(4) The small groups show eagerness to make friends with larger groups.

(5) The factors given below are expected to have liberalising influence on inter-group friendships.

(a) Participation in out-door sports.

(b) Visit to outside states.

(c) Friendship with people outside India.

(d) Extent of newspaper and journal reading.

(e) Marriage of intimate relations to people speaking a
    different language.

This work has confined itself to groups -- Large and small on the basis of language. The phenomenon of interpersonal relations remain untouched.

In 1954 Shakuntala Bhalla[1] worked on "Sociometry in a Classroom". It concentrated on 'Sociometry' which is nothing but finding a pattern of groupings which may range from isolates, pairs, triangles to more intermingled ones.

The study was conducted on eleven year old children. They were given a piece of paper and asked to answer the question -- "To-day you will choose your own co-workers to work with you on the new projects for the next half year. You can choose three members in the class to make a group of four including

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[1] Shakuntala Bhalla, "Sociometry in a Classroom", The Education Quarterly (1954), 6: 33-36.

yourself. After you have given your choice, I shall recognize your work groups". With this sociometric test, scholastic achievements of monthly tests were also collected.

The findings of the study are, that the children's inter-relations run counter to those of the teacher aided organisation of groups. Segregation of sexes preferred. Racial and provincial prejudice is not evident. Length of residence has little to do with choice. Academic attainment has nothing to do with sociometric status.

The conclusion regarding the relation of length of residence with the choice of work-mate is in conformity with the conclusion of M.E. Bonney's work when he says that the number of choices received did not go with the length of time in the school (page 25) though the aim and method of the two studies differ.

In the Education Department of the University of Allahabad, work has been done on 'Linguistics Groupings', 'Mutual Friend-ships (Sociological factors working investigated), and on the 'Inter-action between the Anglo-Indians and Indians'.

Hence in India the work on "Interpersonal relations" is still in its infancy. Work done is, either on inter-group relations' or on 'Sociometric choices'. A planned and systematic work on 'Inter-personal Relations' is still needed in India.

CHAPTER III

DEFINITION OF THE PROBLEM AND THE METHOD OF

INVESTIGATION.

Need for research in the area of interpersonal relations.--
The need for a study of the phenomenon of interpersonal rela-
tions can hardly be over emphasised. It would, however, be
proper to consider this in some detail and examine the case
for the present study.

Firstly, such a study has a cultural value. Any investi-
gation which is made on scientific lines leads us to a syste-
matic body of knowledge. This, in itself is a sufficient ground
for undertaking a study like the present one. The social, cul-
tural, and economic conditions differ from country to country,
and as such, the human relations, which are influenced by
these conditions may also show corresponding deviations, and
the findings of one country may not be applicable to another.
Consequently, the results of investigations conducted in this
area in the Western countries cannot be legitimately applied
to our country. It would, therefore, be desirable to study
interpersonal relationships as brought about in the social-
cultural environment of this country.

The need for such a study can also be visualised from a
practical stand-point. Two of the outcomes of a scientific

study are, a precise understanding and an effective control
of a phenomenon. The latter refers to the utilitarian value
of a study. It can be safely assumed that the study in hand is
likely to yield beneficial results which may contribute to
our understanding and control of those behavioural problems
which one faces in everyday life, both in the formal and
informal situations, e.g., the problems of neuroses and
pschoses which are often referred to as "disorders of perso-
nality because in them the disturbance in one's interpersonal
relationships is so fundamental"[1]. A study of the patients
of Freud and Jung also reveals that in each and every case,
there is some difficulty in interpersonal relations. Again,
the problem of interpersonal relations is likely to assume
greater importance with the urbanisation and industrialisation
of India, because the impact of growing civilization is taken
to be responsible for behaviour disorders. This assumption
has been emphasised by Freud when he says, "....... our so-
called civilization itself is to blame for a great part of
our misery, and we should be much happier if we were to give
it up and go back to primitive conditions." And he continues
to say - "It was found that men become neurotic because they
cannot tolerate the degree of privation that society imposes
on them in virtue of its cultural ideals, and it was supposed
that a return to greater possibilities of happiness would
ensue if these standards were abolished or greatly relaxed."[2]

1/ Norman Cameron, The Psychology of Behaviour Disorders a
    Biosocial Interpretation, U.S.A., Houghton Miffin Company,
    1947, p. 7.
2/ Sigmund Freud, Civilization and Its Discontents, Joan Riviere
    Translator, The Hogarth Press Ltd., 40-42, William N Street,
    London, W.C. 2 and The Institute of Pschoanalysis, 1957,
    pp. 44, 46.

Hence, the vital need for a probe into the situation becomes self-evident and indicative of foresight. Thus, for the solution of the various psychogenic problems at all stages of human development (i.e., childhood, adolescence and adulthood) we must understand the human relations, especially relationships between the twos, towards which the present study is directed.

The need for such a study is imperative not only in abnormal and clinical psychology, but also in educational psychology. 'Prevention is better than cure'. Before the problems become so serious as to deserve clinical treatment, they ought to be tackled within the four-walls of educational institutions. Between these two spheres lie the guidance centres, and from their point of view also, this study should prove valuable because it is their function to offer advice on behavioural problems to homes, schools, colleges, clubs and such other institutions. O. Spungeon English and Gerald H. J. Pearson[1] mention three main problems of adolescents to be tackled:

(1) "The adolescent must take responsibility and learn to think and plan for himself";

(2) "he must choose a vocation and be able to earn his own livelihood";

(3) "he must make some satisfactory solution of his love-life so that he can have personal friends and a community altruism".

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[1] O. Spungeon English and Gerald H.J. Pearson, Emotional Problems of Living, London: George Allen & Unwin Ltd., Museum Street, 1952, p. 354.

Hence, interpersonal relations constitute an important area
of problems for adolescents which should be dealt with for
the prevention of 'neurotic characters'. Investigation into
the phenomenon of interpersonal relationship is, therefore,
desirable for effective personal guidance.

It may be noted that in schools and colleges, while we
are faced with the behavioural problems of big groups like
gangs, we also have to face equally serious problems of the
groups of twos and threes. A study of interpersonal relations
with special reference to paired friendships, therefore, is
of considerable educational importance.

In view of the above, work on interpersonal relationships
needs to be done in its various fields. Basically, the problem
of interpersonal relations involves mutual adjustment between
the twos which are the smallest units of any larger group. As
such, an investigation into the paired friendships should
precede researches in other fields of interpersonal relations.
Probe into the factors underlying paired friendships may thus
lead us to have relevant and helpful discussions on school
organisation, planning curricular and co-curricular activities,
and may assist us in finding ways and means of socialisation
of the adolescents. Besides, it may also give us clues to form
homogeneous groupings among school pupils. Unhealthy feelings,
like casteism, provincialism and linguism etc., if present,
can be discouraged and healthier feelings be fostered. In a
way, the success of our infant democracy depends on the creation
of a corporate life among members of the various groups.

Lastly, the factors involved and discovered in the present

study may also contribute, to the understanding of extreme friendships, and stimulate further researches.

It is for these reasons and since, the phenomenon of mutual friendships is still unexplored in India, the present work is attempted.

The Problem

Out of the various types of human relationships explained earlier[1] the present study will confine itself to the paired friendships only.

Shukla and others[2] studied 'Friendship', the age range being 11+ to 14+. Vreeland and Corey[3] also studied College friendships, the sample consisting of thirty pairs of the same sex. Austin and Thompson[4] studied children's friendships, aiming at the bases of selection and rejection of friends. Another work on friendship choices was done by Reilly, Commins, and Stefic.[5] The subjects are 25 junior pairs and 25 sophomore pairs. They aimed to study whether the friendship choices are due to complementarity of needs or not. The present study is similar to these works and aims to study the bases of pairs.

1/ Chapter I.
2/ Chapter II, page 22.
3/ Chapter II, page 21.
4/ Chapter II, page 24.
5/ Chapter II, pages 28-29.

Considering the bases or factors for the formation of
friendships, Shukla and others assumed ten situations viz.,
companionship, identity of interests, intimacy, practical
ability, intellectual ability, sympathy, adventure, security
and protection, sociability, and sportsmanship. Vreeland and
Corey worked to determine whether the traits constitute some
determining factors for the formation of friendships or not.
Austin and Thompson aimed to study the reasons for choosing
and making changes among their three friends over two weeks
period. The work done by Reilly, Commins and Stefic aims to
study whether the complementarity of needs works in the choice
of friends or not.

The present study also, aims to know the factors under-
lying paired friends. Specifically speaking, it is an investi-
gation into the sociological and psychological factors respon-
sible for the paired friendships during later adolescence.
The factors assumed in this study are considered under two
major headings viz., sociological factors and psychological
factors. The broad general assumption is, that, the paired
friends tend to be similar in the sociological as well as
psychological status, but a few affecting factors also, are
included.

The sociological factors.-- are the factors which are
concerned with the social set up. They are affected by tradi-
tions, customs, economic standard etc. The sociological aspect
may include the following factors:-1/
_____
1/ In the original plan factors 'religion' and 'philosophy of
   life' were also included. But in the initial stage of the
   project, it was felt that the students, firstly, are not
   very much clear in their outlook and secondly, more
   elaborate questionnaires were required to elicit these
   factors. Therefore, they were dropped out.

(i) Socio-economic status.

(ii) Language.

(iii) Culture and living habits.

(iv) Proximity.

(v) Physical appearance.

Each of these may be explained further as follows:-

(i) Socio-economic status.-- The factor is a derivation of three sub-factors, viz., vocational status, economic status, and caste status of the guardians. The present study is concerned with the similarity of these three sub-factors and consequently leading to a similarity of socio-economic status. The vocational status has been categorised under three heads viz., business, professions and government services, and the subjects whose guardians fall under the same category have been considered as of similar vocational status. In the same way caste has been categorised under two groups of high and low, while economic status has been put under three income-groups viz., high (Rs 500/- and above), middle (Rs 100/- - 500/-), and low (below Rs 100/-), and the similarity of subjects determined accordingly. It is assumed the pairs tend to be similar in this factor.

(ii) Language.-- This factor denotes the mother-tongue and the main language of expression *for communication* of the two friends. It is assumed that similarity of these two sub-factors affects the paired friendships.

(iii) Culture and living habits.-- It has been assumed

that the culture and living habits similarities make two
adolescents come together and make friends. Seventeen items[1]
have been taken under this head to denote the culture and
living habits of the subjects.

(iv) Proximity.-- Proximity has for our purposes has
been considered only on the basis of 'family friendship' and
'class fellowship'.

(v) Physical appearance.-- The factor of 'physical
appearance', though physical in nature, has also some socio-
logical implications, and so it has been included within the
broad heading of 'sociological factors', for the sake of
convenience. The colour of the skin, the body built, the
facial appearance etc., may influence social interaction.
The factor includes impressions of the two friends regarding
each other.

For the purposes of this study it is assumed that the
members of the pairs would be similar from the point of view
of all the sociological factors enumerated above. Parametric
and non-parametric approaches have been made to test this
assumption.

The psychological factors.-- are concerned with the
abilities and disabilities of adolescents. The psychological
factors are the factors which are mental in nature irres-
pective of their positive and negative characteristics. The

[1] Appendix B.

factors under this major head are:-

(1) Interests (likes and dislikes).

(ii) Mental ability (School achievement and I.Q.).

(iii) Sentiments.

(iv) Extraversion-Introversion.

(v) Psychological needs.

These may be further explained as follows:-

(i) Interests.-- The term is used in this study denoting likes and dislikes of adolescents. Ten areas of likes and five of dislikes as given in Appendix C_1 and C_2, have been included. Three choices of the pair in these areas have been checked and given a similarity score.

(ii) Mental ability.-- Mental ability denotes school achievement and intelligence quotient. The school achievement has been divided in three grades (the usual practice) and pairs falling in the same grade have been taken as similar. Regarding the similarity of I.Q. only those pairs are taken as similar who have I.Q. within five points.

(iii) Sentiments.-- Sentiments are the emotional organisations related to an object or an idea. It is a more or less permanent tendency to experience an emotion or desire with reference to a situation. The study in hand is not concerned with the particular location of a particular sentiment or stage of organisation of sentiments, but it is concerned only with the trend of the sentiments. If the trend of the sentiments of the two friends is flowing in the same direction

they are taken to be similar otherwise not and thus we get
the similarity value of one and zero.

(iv) Extravershion-Introversion.-- Extraversion denotes
the direction of ones interests outwards to the objective
world, whereas the term 'introversion' is used for the direc-
tion of ones interests inwards to the feelings and thoughts
of the self. In case of extraversion 'object' and in case of
introversion 'subject' is all important. Here, only the trends
are taken into consideration. The clue of these trends has
been found from the responses to TAT and interest inventory.
No objective score could be obtained. The similarity is taken
on the basis of all or none only.

(v) Psychological needs.-- Psychological needs may be
described as inner drives which are proceeding from incomple-
teness towards completeness. The needs are the inner states
of an individual struggling throughout the life for satisfac-
tion in the environment or 'press' which may be satisfying
or dissatisfying. In the present study, all the primary and
secondary needs described by Murray[1] in his book "Explorations
in Personality", and besides these needs one more, 'need for
negativism (resistance and misbehaviour)' as given by Rohd,[2]
are tackled. The assumption is that the paired friends tend
to possess similarity of psychological needs. Similarity has
been measured by taking a range of five points in TAT needs
scores and of only one point in SCT needs score.

1/ H. Murray, Explorations in Personality, Chapter III,
    Oxford University Press, New York, 1938.
2/ Rohd's manual of Sentence Completion Test (SCT).

in the below average category (below 90), 29 in average
group (90 to 120) and 14 are in superiors (120 and above)
in the boys group. In case of the girls the distribution of
I.Q. is as follows: 54 belong to below average 31 to average
class and 15 to the superior category. The distribution of
the group from which pairs were selected for detailed study
is as follows:

Table 1. Boys contacted and selected for study.

Name of the Institution	Class	No. of students contacted	No. of pairs selected	No. of pairs studied
1. Colonelgunj Inter College	XI	40	4	3
2. D.A.V. Inter College	XI	20	4	3
3. Anglo-Bengali Inter College	XI	42	7	7
4. C.A.V. Inter College	XI	36	5	5
5. S.P. Inter College	XI	18	2	2
6. R.R. Inter College	XI	38	7	6
7. Agrasen Inter College	XI	25	4	4
8. H.K.P. Inter College	X	12	2	2
9. K.P. Inter College	XI (A)(B)	26+15	4	4
10. S.K.P. Inter College	X	19	4	4
11. Agrawal Inter College	XI (A)(B)	48+22	11	6
12. E.C. College	XI	46	6	4
	Total	407	60	50

Table 2. Girls contacted and selected for study.

Name of the Institution	Class	No. of students contacted.	No. of pairs selected.	No. of pairs studied
1. Croathwaite Girls Inter College	XI	58	9	9
2. Mahila Vidyapeeth	XI	18	2	2
3. Gauri Pathshala Inter College	XI	43	12	11
4. Mary Wanamaker	XI	12	3	3
5. D.P. Inter College	XI	60	18	13
6. Gram Vidyapeeth	X	19	4	4
7. Adarsh Kanya Pathshala	X	28	6	6
8. H.M.V. Inter College	XI	23	7	2
	Total	261	61	50

Almost all the institutions are contacted, so that, the sample comprises of all the types of students.

Rationale for selecting adolescents.-- A word about adolescence during which period the subjects of the present investigation lie. "Adolescence is traditionally defined in physical terms as the period of growth beginning with puberty and ending with adulthood. ... adolescence is both a biological process and a socio-cultural phenomena"[1]. Cole[2] defines it

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[1] Encyclopedia of Educational Research, "Adolescence", p. 18, Encyclopedia of Educational Research, The Macmillan Company, New York, 1950.
[2] L. Cole, Psychology of Adolescence (Third Edition), Rinehand and Company, Inc., New York, p. 211.

as "a period of social development and adjustment". Fowler

D. Brooks[1] says, that it is a "period of growth extending

approximately from ages twelve or thirteen to twenty". But

the age limit is very approximate.

With the psycho-physical reference of this period, we

must take the social aspect as well. In this period the

adolescents are more interested in their group life. In

adolescence, as Flaming[2] says, "Awareness of success and the

receiving of praise are a greater stimulation to learning

than indifference and neglect on the part of one's associates;

and discouragement or reproof, though they may lead to a

sudden spurt, can be observed progressively to lose their

effectiveness". The adolescent period is pre-eminently, a

period of social development and adjustment. During this

period of the boy or girl becomes acutely aware of social

pressures and relationships. "One of the characteristics"

says Doris Odlum,[3] "of adolescence is the desire to have an

intimate friend." They want to have personal relationships

with some one with whom they can share their hopes and fears,

joys and sorrows, and their secrets.

Thus we find that adolescence is a period of psycho-

sociophysical changes. Taking this in view, this particular

1/ Fowler D. Brooks, The Psychology of Adolescence, Houghton
    Mifflin Company, Boston, New York, Chicago, Dallas,
    Atlanta, San Franciso, 1929, p. 1.
2/ C.M. Flaming, Adolescence - Its Social Psychology,
    Routledge & Kegan Paul Ltd., London, 1951, p. 165.
3/ Doris Odlum, Journey Through Adolescence, Delisle Limited,
    London, 1957, p. 123.

period has been selected for study. Again, the present study does not include the whole adolescent period. It studies only the later adolescence in the age range of 15+ to 18+, just because the adolescents become stable and are maturely aware of the formation of friendships and the factors working for these relations. The reason for approaching only the X and XI classes is, that the subjects, with a few exceptions, are available in these grades mainly.

To summarise, the work consists of

A study of mutually attracted adolescents, i.e., pairs of (a) boys, (b) girls, under the hypothesis of a significant degree of similarity in selected sociological and psychological factors measured in subjective and objective terms, the sample being within age-range of 15+ to 18+ of 50 pairs of boys and girls - drawn from institutions of Allahabad proper.

It was originally intended to assess the interpersonal relationship between boys and boys, girls and girls, and also between boys and girls, but since pairs of boys and girls were not available, we had to restrict our study to the unisexual relations only.

The Method

The method may be discussed under three major heads:-
(1) The tools, (2) The procedure, (3) The method of analysis of data.

The tools.-- For investigating into the sociological factors, the tool employed is a questionnaire supplemented

with interview.[1] To check and to add to the information, teachers also have been interviewed.[2]

The questionnaire (See Appendix B) used, is divided into three major sections:- Section I - consisting of fifteen questions regarding general information. Section II - termed as 'Part A' in the questionnaire. The section, comprising of fourteen questions, aims to locate the pairs. Section III - termed as 'Part B', is meant to study the sociological factors. Twentyone questions, in all, are set.

The first four questions of 'Part A' tell us regarding four different situations in which the two friends want each others help. These four situations are 'need for a text-book', 'help in home task', 'going to a school function' and 'going for an evening walk'. Questions 5, 6, 7, 8, 9, 10, 11 and 12 are asked only because any adolescent boy or girl may tend to name the person, whom he or she mostly attracted to. Questions 13 and 14 are direct enquiries about best friends.

'Part B' aims to find out the sociological factors underlying the mutual interpersonal relations.

Question No. 1 is an enquiry into the language factor, which is supplemented by the data collected on mother-tongue in Section I of the questionnaire.

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[1] Interview Schedule for Students (See Appendix F).
[2] Interview Schedule for teachers (See Appendix G).

Questions 2 to 18 are to find out the culture and living habits. Here some questions are framed about his or her best friend's living habits and the same questions are asked about his or her own living habits so that the answers may be compared for the two friends. The remaining questions are mainly concerned with the cultural aspect. Questions 19 to 21 help us to find out the proximity factor. In the end the description of the best friend is meant to evaluate the factor of 'physical appearance'.

So far as the psychological factors are concerned, following tests and inventories are used:

Psychological factors assumed	Tools
1. Interests (likes and dislikes)	Interest Inventory.
2. Mental ability (school achievement & I.Q.)	Jalota Group Intelligence Test & School examination results.
3. Extraversion-Introversion	Interest Inventory and T.A.T.
4. Sentiments	T.A.T. & Sentence Completion Test.1/
5. Psychological needs	T.A.T. and Sentence Completion Test.

The 'Personality and Interest Inventory' by Gertrude Hildreth has been translated into Hindi with necessary modifications made here and there to suit Indian conditions (See Appendix C1, C2). These modifications do not, in any way, affect the reliability and validity of the inventory. The reason for selecting this particular inventory is its

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1/ S.C.T.

simplicity. Moreover other inventories, by Strong, Kuder, Lee Thorpe,[1] are mainly for the location of vocational interests and their scoring system is more complex than that of the selected one. The purpose of the present study is not to locate a particular interest, but to find out and check the similarity in interests of the two friends. The modified form of the inventory by Gertrude Hildreth appears to be the simplest of all for the present investigation. It was tried on a few students before its actual use in order to ascertain its suitability.

To test the intelligence of the two mutually attracted pupils, 'Jalota Group Intelligence Test' has been administered (See Appendix E). The test is selected because it is easily manageable and highly reliable for the population selected for this study. Information regarding school achievement has been gathered from examination results, and checked by teachers' and pupils' own opinions.

Ten Thematic Apperception Test original pictures have been administered to study the underlying psychological needs of the paired friends. The ten pictures selected for the study do not present apparently foreign atmosphere. Before starting the actual work, this fact was checked by administering the original pictures as well as their Indian adaptation[2] on a few cases. It did not reveal any marked difference in their responses.

1/ Lee J. Cronbach, Essentials of Psychological Testing, Harper & Brothers, Publishers, New York, 1960, pp. 405-437.
2/ Adapted by Bureau of Psychology, Allahabad.

The ten cards used in this study are 1, 7 BM, 3 BM, 6 BM, 7 GF, 4, 13 MF, 18 GF, 12 GF, 16. Cards (7 BM, 3 BM, 6 BM, 7 GF, 13 MF, 18 GF, 12 GF) which are meant for boys and girls exclusively, have been selected for comparative evluation of the two groups. Moreover, the study was intended to find out the factors for mutual attraction between boys and girls also, and for that very reason heterogeneous selection of cards has been made.

Rohd's 'Sentence Completion Test' has been translated into Hindi (See Appendix D) to complement the results of T.A.T., for finding out the trend of sentiments, and psycho-logical needs of the paired friends. Out of the other prominent projective techniques, (Four-Picture Test, House-Tree-Person Test Make-a-Picture-Story Test etc.),[1] sentence completion technique seems to be the most suitable from the point of view of its simplicity and reliability even after its Hindi translation.

The procedure.-- The procedure adopted for the study envisaged the following three distinct steps:-

(1) To find out the patterns of interpersonal relations in the group contacted in each institution separately and to prepare sociograms to designate pairs.

(2) To pick up the positive relations (pairs) from the friendship pattern revealed under step 1.

(3) To make a study of these positive relations.

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[1] Ibid., p. 574-575.

The procedure followed was firstly, to administer questionnaire, to all the pupils in a class in different institutions.

Secondly, the paired friends, which were found out by the help of the questionnaire (Part A) were given 'Sentence Completion Test' and 'Interest Inventory' with ten minutes rest. In some Colleges these two tests were administered on different days.

Jalota Group Intelligence Test and T.A.T. were administered on different days with all possible care.

The pupils were then interviewed for supplementing the sociological factors, just after the T.A.T. was administered for two reasons -- firstly, the student might not take the interview as a separate test and resist it, and secondly, a good rapport could be established to ensure their full co-operation. The class-teachers or the principals of the institutions were also interviewed in order to supplement and confirm the data.

The above procedure was adopted in all the aforementioned colleges in order to have standard conditions.

<u>The method of analysis of data.</u>-- The data collected has been analysed with the help of the following computations:-

Mainly non-parametric tests are used. Only in a few cases parametric approach has been followed.

Non-parametric	Parametric
Sociological factors are:	1. Culture and living habits
1. Socio-economic status	
2. Language	
3. Proximity	
4. Physical appearance	
Psychological factors are:	1. Interests (likes and dislikes)
1. Mental ability	2. Psychological needs
2. Sentiments	
3. Extroversion-Introversion	

C (Coefficient of contingency) has been used as a measurement of correlation between two factors.

r_t has been calculated where 'C' could not be used.

CHAPTER IV

INVESTIGATION

As explained earlier the factors assumed in this study
are mainly - sociological and psychological, which are further
divided into socio-economic status, language, culture and
living habits, proximity, physical appearance, interests, mental
ability, psychological needs, extraversion-introversion and
sentiments.

The analysis is done with a view that the paired friends
have similarity of 'socio-economic status', 'language',
'culture and living habits', and 'proximity' and 'physical
appearance' as affecting factors under the heading of socio-
logical factors. As regards the psychological factors, again,
the analysis is attempted with the assumption that the inter-
ests, mental ability, psychological needs, extravertive-
introvertive trends, trends of sentiments are similar among
paired friends.

Apart from the aforementioned assumed factors, a few
sociological factors (enumerated by the pupils themselves
while interviewed and as a result of responses to question
No. 14 and description of the best friend in the questionnaire),
and two important psychological factors viz., depressive state
and anxiety state (emerged in the course of analysis of T.A.T.
responses) will also be dealt with.

Scheme of the Chapter

In view of above, the analysis is attempted under the following heads.-

A. Analysis of data for boys

B. Analysis of data for girls

C. Comparison

D. Selected case studies

E. Analysis of data from factorial angle.

A. Boys

(a) General information of the cases in pairs.-- Out of the 407 cases contacted in all the institution[1] the following mutually attracted fifty pairs have been taken for this study. General information about the cases involved in each pair is given below:

Table 3. General Information of the cases Studied (Boys)

Pair No.	Name	Age	Cla-ss	Occupation of the guardian	Income of the guardian	Caste	Mother tongue
1	2	3	4	5	6	7	8
1. (a)	Murari Lal	17	XI	Business	Below 100	Sch.	Hindi
(b)	Ansuya Prasad	17	XI	Farm	About 250	Hindu	-do-
2. (a)	Rajiv Lochan	16	XI	Service	70 to 80	-do-	-do-
(b)	Maya Shankar	16	XI	Farm	50 to 60	-do-	-do-
3. (a)	Manju Gopal	16	XI	Teacher	About 300	-do-	Bengali
(b)	Rudra Kant	15	XI	Teacher	Above 500	-do-	Hindi
4. (a)	Yogendra Pal	16	XI	Pension	100 or above	-do-	-do-
(b)	Nirmal Kant	18	XI	Lawyer	-	-do-	-do-

1/ See Page 43

Table 3. (Continued)

1	2	3	4	5	6	7	8
5.	(a) Raj Kumar	18	XI	Business	Below 100	Hindu	Hindi
	(b) Vinod Kumar	17	XI	Lawyer	‑	‑do‑	‑do‑
6.	(a) Keshri Prasad	17	XI	Business	Below 100	Kachi	‑do‑
	(b) Shiv Sh. Lal	17	XI	Business	Below 100	Kurmi	‑do‑
7.	(a) Avinash Ch Sri.	18	XI	Govt: service	About 200	Hindu	‑do‑
	(b) Ram Bali Sri.	17	XI	‑do‑	150 to 200	‑do‑	‑do‑
8.	(a) Primal Nandi	18	XI	Rly.Clerk	About 150	‑do‑	Bengali
	(b) Tapan Bhattacharya	18	XI	A.G.Office	150 to 200	‑do‑	‑do‑
9.	(a) Abdul Hamid	17	XI	Business	Below 100	Muslim	Urdu
	(b) Shiv Pd. Jaiswal	18	XI	Service	Below 100	Hindu	Hindi
10.	(a) Ramji Srivastava	15	XI	Rly.service	200 & above	‑do‑	‑do‑
	(b) Kailash N. Sinha	15	XI	Service	100 to 150	‑do‑	‑do‑
11.	(a) R.R. Kidwai	17	XI	‑do‑	Above 500	Muslim	Urdu
	(b) K.C. Virmani	17	XI	Business	‑do‑	Hindu	Sindhi
12.	(a) Lakhan Lal	17	XI	Service	Below 100	‑do‑	Hindi
	(b) Devi Prasad	18	XI	‑do‑	100 to 150	‑do‑	‑do‑
13.	(a) S.S. Kazim	15	XI	Farm	‑	Muslim	Urdu
	(b) S.D. Hussain	15	XI	Service	100 or below	‑do‑	‑do‑
14.	(a) Rameshwar Nath	15	XI	‑do‑	100 to 150	Hindu	Hindi
	(b) Mohan Lal	15	XI	Business	100 to 150	‑do‑	‑do‑
15.	(a) Prem S. Singh	18	XI	‑do‑	100 & above	‑do‑	‑do‑
	(b) Prem B. Singh	18	XI	Motor driver	About 100	‑do‑	‑do‑
16.	(a) Satish Verma	16	XI	Postmaster	300 to 400	‑do‑	‑do‑
	(b) V.B. Pd. Sriv.	17	XI	Service	100 to 150	‑do‑	‑do‑
17.	(a) Muvin Ahmad	17	XI	‑do‑	Below 100	Muslim	Urdu
	(b) Sangam Lal	16	XI	Peon	Below 100	Hindu	Hindi

(Continued)

Table 3. (Continued)

1	2	3	4	5	6	7	8
18.	(a) Kedar Nath	18	XI	Farm	About 100	Hindu	Hindi
	(b) U.S. Tripathi	18	XI	-do-	-do-	-do-	-do-
19.	(a) Ramji Pandey	17	XI	Service & Business	-do-	-do-	-do-
	(b) Khem R. Pandey	16	XI	Service	200 to 250	-do-	-do-
20.	(a) Ayodhya Prasad	16	XI	Farm	Below 100	-do-	-do-
	(b) Ravindra Kant	17	XI	Teacher	Above 100	-do-	-do-
21.	(a) S.S.K. Vaishampayan	18	XI	Priest	Below 100	-do-	-do-
	(b) Shyam Babu	16	XI	Business	500 or above	-do-	-do-
22.	(a) Yogi Raj	16	XI	Teacher	Below 100	-do-	-do-
	(b) S.A.H. Shah	16	XI	Farm ~~Teacher~~	100 to 200	Muslim	Urdu
23.	(a) Munna Singh	18	XI	Farm	Below 100	Hindu	Hindi
	(b) A.N. Singh	16	XI	-do-	-do-	-do-	-do-
24.	(a) Udai Singh	18	XI	Service	-do-	-do-	-do-
	(b) B.B. Pandey	17	XI	Business	100 to 150	-do-	-do-
25.	(a) Arun Kumar	15	XI	Service	400 & above	-do-	-do-
	(b) K.N. Shukla	15	XI	-do-	300 to 350	-do-	-do-
26.	(a) Chandra Pal	17	XI	Farm	100 or below	do-	-do-
	(b) Chunni Lal	17	XI	-do-	100	-do-	-do-
27.	(a) Hari Mohan	15	XI	Service	100 & above	-do-	-do-
	(b) Ram Chandra	17	XI	Labourer	Below 100	Sch. caste	-do-
28.	(a) Subhash Chandra	15	XI	Reporter	300 to 400	Hindu	Hindi
	(b) Amrit Prakash	15	XI	Farm	Below 100	Sch. Caste	Hindi
29.	(a) Mohan Lal	18	XI	Service	About 100	Hindu	-do-
	(b) Gauri Shankar	18	XI	-do-	100 to 150	-do-	-do-
30.	(a) Ram Sanjeevan	17	XI	Farm	Below 100	-do-	-do-
	(b) Purshotam Das	17	XI	Service	Below 100	-do-	-do-

Table 3. (Continued)

1	2	3	4	5	6	7	8
31.	(a) O.P. Jaiswal	18	X	Farm	100	Hindu	Hindi
	(b) S.K. Jaiswal	17	X	Service	150 to 200	-do-	-do-
32.	(a) Phool Chandra	16	X	-do-	100 or below	do-	-do-
	(b) Pitambar Lal	17	X	-do-	Below 100	-do-	-do-
33.	(a) R.B. Srivastava	17	XI	Pension	-do-	-do-	-do-
	(b) D.L. Patel	17	XI	-	-do-	Kurmi	-do-
34.	(a) Anjani Kumar	15	XI	Service	100	Hindu	Hindi
	(b) Yogendra Nath	15	XI	-do-	About 100	-do-	-do-
35.	(a) L.B. Chaurasia	18	XI	Business	Below 100	-do-	-do-
	(b) Kamal Swarup	17	XI	Service	150 to 200	-do-	-do-
36.	(a) Sri Kant Malvia	15	X	Business	-	-do-	-do-
	(b) K.N. Mehrotra	15	X	-do-	-	-do-	-do-
37.	(a) Chandra Kishore	17	X	Service	About 200	-do-	-do-
	(b) M.C. Kakkar	15	X	Business	100 or above	-do-	-do-
38.	(a) K.K. Malviya	15	X	Govt: service	100 to 150	-do-	-do-
	(b) A.K. Mehrotra	17	X	Teacher	100 & above	-do-	-do-
39.	(a) Bharat Singh	18	X	Farm	-	-do-	-do-
	(b) R.K. Mehrotra	18	X	Service	About 100	-do-	-do-
40.	(a) P.N. Mehrotra	18	XI	-do-	Below 100	-do-	-do-
	(b) Dharam Pal	16	XI	Business	200 to 300 or above	-do-	-do-
41.	(a) S.N. Swarnkar	16	XI	-do-	-	-do-	-do-
	(b) R.K. Jaiswal	16	XI	-do-	-	-do-	-do-
42.	(a) Chandra Shekhar	18	XI	-do-	-	-do-	-do-
	(b) R.C. Gupta	17	XI	-do-	-	-do-	-do-
43.	(a) Chhagan Lal	16	XI	Cashier	150 to 200	-do-	-do-
	(b) Narendra Kumar	16	XI	Business	Above 500	-do-	-do-

(Continued)

(1) <u>Vocational status.</u>-- Out of the 50 pairs, only 25 are the wards of persons engaged in similar vocation. The $\widehat{\sigma}p$ = .07 and p = .50 suggest that out of the pairs picked up at random at least 16 and not more than 34 pairs will tend to be similar in this particular sub-factor.

	S	D[1]
f_o	25	25
Difference	0	

(2) <u>Economic status.</u>-- Only 34 pairs come from similar economic status, i.e., p = .68 and p = .07 lead us to an inference that the range of similar pairs picked up at random will be 25 to 43 in 99 samples out of 100.

	S	D
f_o	68	32
f_e[2]	47	53
x^2	17.7	
df	1	

P lies beyond the table (Highly significant)

(3) <u>Caste status.</u>-- Out of 50 pairs observed, 46 have the similarity of caste status. The statistics suggest that pairs picked up at random will at least 82% be similar in caste status.

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[1] 'S' and 'D' denote similarity and dissimilarity respectively.
[2] f_e (frequency expected) here has been calculated by combination and permentation.

	S	D
f_o	92	8
f_e	81	19
X^2		7.9
df		1

P lies beyond the table (Highly significant)

The above analysis clearly shows that out of the three sub-factors, similarity of economic status, similarity of caste status make a highly significant contribution (X^2 = 17.7 and 7.9 respectively) to the pairing of friends, while the factor of vocational status is not significant, the difference between 'S' and 'D' being zero. It may, however, be observed that because of the contribution of the first two sub-factors, the role of the socio-economic factor as a whole has become significant. In other words, the adolescents coming from similar socio-economic status tend to be attracted to each other and be friends.

II. <u>Language</u>.-- From table 4 it is clear that in the case of 44 pairs the language of the two friends is similar, while in the case of the remaining 6 pairs it is fifty per cent similar. The data in this case can be analysed under two heads - (1) mother tongue and (2) the language of communication as follows:

(1) <u>Mother tongue</u>.-- p = .88, $^\sigma$p = .05, i.e., similar pairs in mother tongue are to be found between 75% to 100% limits.

	S	D
f_o	88	12
f_e	70	30
X^2		15.4
df		1

P lies beyond the table (Highly significant).

(2) Language of communication is the same for all the 50 pairs.

The above data clearly shows the significant role played by the factor of language in the pairing of adolescents. The parent-population consists of five different languages (Hindi, Punjabi, Bengali, Urdu and Sindhi) and the fe for similar pairs is 70% and the departure of the fo is highly significant as the value of X^2 is 15.4. Therefore, we can safely say, that the similarity of language is an attracting factor in the pairing of friends.

III. <u>Culture and living habits.</u>— All the 50 pairs have a certain level of similarity in this particular factor. The significance of the similarity working, can be calculated as follows:-

$$M_o = 12.30; \quad M_e = 8.5$$
$$\sigma M_o = .354; \quad \sigma M_e = .404$$

$$CR = 7.1 \text{ (Highly significant)}$$

This shows that out of the 17 possible responses indicating similarity in 'Culture and living habits' friends will give in 95 samples out of 100 12 to 13 'yes' responses (12.30 ± .708 =

11.59 - 13.01). The mean observed (Mo) is 12.30 and the Me (mean expected) is 8.5 and CR equals to 7.1 (Highly significant in favour of Mo) whibh leads us to an inference that similarity in this particular factor is significant in the pairing of friends. In other words, the friends are likely to have similar living habits and have similar cultural tastes. Even if they do not come from similar cultural environment, perhaps they tend to become more or less alike in this respect during the course of time. (This mutual give and take is a dynamic side of interpersonal relations and may be investigated into for fuller understanding. Here it is just a guess that there might be some adjustment in the cultural tastes). Whatever be the phenomenon of dynamism with which we are not concerned in the present study, it is clear that similarity of culture and living habits tends to be present among the paired friends.

IV. _Proximity_.-- Out of 50 pairs, 38 pairs come from the families who know each other, and the remaining 12 pairs have only 50% proximity, i.e., they are only class-fellows. (Similarity and dissimilarity of this factor has been calculated on the basis of the friends coming from the families known to each other or not). $p = .88$; $\sigma p = .05$ give us a range of 75% to 100% of the pairs who are affected by this factor if picked up at random.

	S	D
f_o	88	12
f_e	50	50
x^2	56.2	
df	1	

P lies beyond the table (Highly significant)

The frequencies on the 'similarity' of the factor 'proximity' are apparently much higher than those on dissimilarity side. The x^2 value is highly significant which shows that proximity is a highly significant attracting factor among pairs.

V. <u>Physical appearance and other contributing factors</u>.-- The assumption was that the physical appearance attracts two adolescents towards each other. In the questionnaire the subjects were required to give a brief description of their best friend, the assumption being that the factor of physical appearance will automatically find a place in this description if it happened to be a contributory factor to their mutual attraction. Besides the data on physical appearance which was obtained through this description, it also revealed a few other affecting factors. A direct question in the questionnaire (Q. No. 14) aimed at eliciting the reasons for such attraction, as well as the interview also helped to obtain their freely expressed impressions regarding the affecting factors. These, however, are their own impressions (positive or negative), or what they have perceived in each other and as such may be termed as subjective.

These factors given by the pupils themselves, were numerous and have been categorised under ten heads given below:-
   (i) Positive behaviour pattern.
   (ii) Studies and intellectual qualities.
  (iii) Proximity.
   (iv) Similarity.
    (v) Mutual relations.
   (vi) Sports.

(vii) Assertive qualities.

(viii) Submissive qualities.

(ix) Negative behaviour pattern.

(x) Physical appearance.

The whole list of responses is given in Appendix H.

(i) <u>Positive behaviour pattern</u>.-- The factor includes those types of behaviours which are positive in nature, e.g., 'good behaviour', 'talks nicely', 'behaves properly', 'mannerly', 'disciplined', 'sincere', etc. The enumerations on the behaviours which are positive are included under this head. 44 pairs are attracted by positive behaviour pattern (Table 4).

	S[1]/	D
f_o	44	6
f_e	25	25
x^2	27.2	
df	1	

P lies beyond the table (Highly significant)

The x^2 value (27.2) suggests that the behaviour pattern which is positive in nature is highly significant as an attract- ing agent among the paired friends. The adolescent boys tend to become friends if they are good in behaviour. It might further be inferred that good behaviour and good manners lead to mutual attraction and leading thereby to mutual friendships. It is perhaps that the two friends admire each other's behaviour

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1/ 'S' stands for frequencies for similar responses regarding their best friend in this and other nine subjective factors.

pattern and are attracted to become friends. Mutual friendships
are based and last on positive behaviour patterns. p = .88 and σp
tell us that in 99 samples out of 100 at least 75% of the pairs
will enumerate the behaviour which is positive in nature, respon-
sible for their friendship. Hence, this factor also is a highly
significant affecting agent in paired friendships.

(ii) <u>Studies and intellectual qualities</u>.-- The factor
includes those qualities which are related to intellect, and
studies, e.g., 'good at studies', 'wise', 'intelligent', 'good
essay writer', 'poet', etc. Out of 50 pairs studied, only among
31 pairs, the factor seems to affect their friendships (p = .62;
σp = .07).

	S	D
f_o	31	19
f_e	25	25
X^2	2.4	
df	1	

P lies at .20 (Insignificant)

Though the frequencies for similar responses are more than
the dissimilar ones, yet, X^2 value is insignificant. We may,
therefore, draw an inference that the 'studies and intellectual
qualities', though, important may go into the background if other
attracting factors viz., socio-economic status, behaviour pattern
or proximity come into play. This conclusion is in conformity
with the results we obtain from the X^2 values of 'mental ability'
(which is objectively derived; pages 77-78). Similarity in
school achievement and intelligence quotient is insignificant as

an attracting factor among paired friends. Hence, the 'studies
and intellectual qualities' might be an object of admiration or
appreciation in some pairs but it does not seem to be a determin-
ing agent in the mutual relations. It is an object of appreciation
or admiration, because had they not admired, they would not have
mentioned it in their description of friends or as a response to
the interview. Therefore, the factor is not a determining agent
for pairing but an object of appreciation.

(iii) <u>Proximity</u>.-- The questionnaire was limited only to
the proximity of being class-fellows and of family friendships.
But the interview revealed a few other sub-factors and, therefore,
it is taken under a separate heading. The proximity here includes
the 'nearness of houses', 'same village', 'same mohalla', 'some
distant relations' etc. The factor 'proximity' seems to play an
effective role in the friendships of 46 pairs; $p = .92$; $\sigma p = .04$
(Table 4).

	S	D
f_o	46	4
f_e	25	25
x^2		33.6
df		1

P lies beyond the table (Highly significant)

The data obtained here also confirm the results discussed
previously (factor No. IV page 65). There the X^2 value is 56.2
and here the X^2 value is 33.6. Both the values indicate that the
proximity is a highly significant factor for the pairing phenomenon.
The percentages are even higher when compared to the positive

behaviour pattern. Hence we can say that proximity is a highly significant and important factor in mutual friendships.

(iv) <u>Similarities</u>.-- Under this head we have taken the impressions of the two friends. It includes the responses of the students themselves for all kinds of similarities responsible for their friendships, e.g., 'similar nature', 'similar school achievement', 'similar likes and dislikes', 'similar economic status', etc. The perception of these various kinds of similarities is evident only in 22 pairs (Table 4).

	S	D
f_o	22	28
f_e	25	25
x^2	.6	
df	1	

P lies between . 50 - .30 (Insignificant)

As the x^2 value is not significant it is taken to be an insignificant factor for mutual attractions. Therefore, we cannot say decisively about the impfact of this particular factor. In 99 samples out of 100 at least 26% and not more than 62% pairs will perceive similarities between themselves. There is a perception of this factor, no doubt, in certain pairs, but still the phenomenon remains unexplored.

(v) <u>Mutual relations</u>.-- The factor includes the enumerations such as 'mutual help - in studies, or in exchanging books or in solving problems', 'mutual understanding', etc. Only 14 pairs tend to perceive this factor (Table 4).

	S	D
f_o	14	36
f_e	25	25
x^2	8.8	
df	1	

P lies beyond the table (Highly significant)

The percentages in favour of it as an attracting agent is very low rather lesser than those for not affecting ones. The departure of the f_o from f_e is highly significant in favour of it as not affecting agent. This leads us to an inference that the friendships are not based genuinely on the 'mutual relations'. At least 30% and not more than 43% of the pairs will enumerate this factor as $p = .28$ and $\sigma p = .06$. The friendships will continue to be established and maintained even if there is no 'mutual help' - it rather seems to be 'not attracting' factor. Mutual help of any kind is situational might be an 'effect', not a basis of friendships.

(vi) Sports.-- Sports of any kind have attracted a few pairs (only 8, out of 50 pairs studied as the table 4 indicates).

	S	D
f_o	8	42
f_e	25	25
x^2	21.8	
df	1	

P lies beyond the table (Highly significant)

The factor is insignificant for attracting the paired friends to each other. The difference is highly significant in

favour of it as an 'not affecting' factor. Sports or sportsmanship
might be an object of appreciation and admiration among pupils but
as a factor responsible for mutual friendships, it is insignificant
as the data tell us only 3% to 29% will attracted to each other
by this factor, the p being .16 and $p = .05$. The sports might be
a good attracting factor for larger groups consisting of more than
two or three adolescents but for mutual attraction, or for pairing
of friends, it is not at all significant.

(vii) <u>Assertive qualities</u>.-- Assertive qualities include
enumeration of those qualities which denote assertion, e.g.,
'popular', 'bold', 'self-confident', 'active' etc. This factor is
again derived from the impressions of the two friends and the
range of the friendly pairs who will tend to perceive is 32% to 68%.

	S	D
f_o	25	25

The frequencies of pairs are 50% on both sides and the
difference is zero, which proves no significant relationship
with the criterion.

(viii) <u>Submissive qualities</u>.-- The heading includes just
the opposite of 'assertive qualities', e.g., 'submissive nature',
'modest', 'humble', 'gentle', 'obedient' etc. Out of the 100 pairs
studied, in 99 samples, at least 34 and not more than 70 will tend
to enumerate this quality in their friends.

	S	D
f_o	26	24
f_e	25	25
x^2		.2
df		1

P lies between .70 - .50 (Insignificant)

The frequencies tend to be more in favour of it as an attracting factor, but the departure of f_o from f_e is not significant. Therefore, this is also an insignificant attracting factor.

But when we look into the enumeration of 'Assertive and submissive' qualities, we can suspect that either it is a basis of 'dynamism of mutual interpersonal relations' or it is an impact of the phenomenon of mutual interpersonal relationships. An investigation into the 'dynamism of mutual interpersonal relations' might explore the phenomenon.

(ix) <u>Negative behaviour pattern</u>.-- The behaviour pattern which includes 'mischiefs', 'teasing fellow beings', 'picking quarrels' etc. Here we find from table 4 that 21 pairs are attracted to each other by this factor (p = .42; σp = .07).

	S	D
f_o	21	29
f_e	25	25
x^2	1.0	
df	1	

P lies at .30 (Insignificant)

The factor is neither significant as an 'affecting' nor as an 'not affecting' agent. Though the enumeration is high enough, yet it is less than the percentages on the 'not affecting' side. The factor is not significant here, it is true, but again, it leads us to some suspicion on the dynamic aspect of the phenomenon of interpersonal relations.

(x) <u>Physical appearance</u>.-- The factor seems to attract very few friends i.e., only 10 pairs as the table 4 suggests (p = .20; σp = .06).

	S	D
f_o	10	40
f_e	25	25

x^2 16.8

df   1

P lies beyond the table (Highly significant)

Physical appearance among adolescent boys plays a very meagre role. It is insignificant as an attracting factor. The difference in favour of it as a not affecting factor is highly significant. In the 'brief description of their best friend' they have mainly described the behaviour pattern and the qualities, and wherever, (though very few), they have mentioned the physical appearance of their best friend, have described the physical built or health, not the good looks, unlike girls, who have mainly described the beauty of their best friend. Hence the physical appearance are negatively related with friendship groupings among boys.

All the enumerations of the pupils themselves lead us to the problem of dynamism of mutual relations, because unless we study this phenomenon, the place and role of the enumerated factors remain undiscovered, though they have definitely some place no doubt.

(d) <u>Psychological Information</u>.-- The psychological information gathered from the responses of all the fifty pairs to the tests[1] administered, are given below:

(c) <u>Analysis and interpretation of psychological factors.</u>--

I. <u>Interests.</u>-- The factor has been sub-divided and studied under two heads: (1) likes; (2) dislikes.

(1) <u>Likes.</u>-- A certain percentage of similarity of likes is evident among all the pairs as table 5 suggests, but still in order to find out the relavance of the sub-factor following calculations have been done:

$$M_O = 10.62; \quad M_e = 14.50$$
$$\sigma M_O = \quad .42; \quad \sigma M_e = \quad .69$$
$$CR = 4.79 \text{ (Highly significant)}$$

The mean observed (M_O) for similarity scores equals to 10.62 and the mean expected (M_e) is 14.5, CR being 4.79 in favour of M_e. Thus it is not the similarity but the dissimilarity of likes which is working. They tend to have dissimilar likes or tastes in activities, games, school subjects, choice of future occupation etc. Out of 29 possible responses indicating similarity in likes the paired friends will give 10 to 11 similar responses in 95 samples out of 100. In a nut-shell the mutually attracted friends, as the data suggest, tend to be more dissimilar than similar so far as 'likes' is concerned.

(2) <u>Dislikes.</u>-- Under this sub-heading also certain level of percentage of similarity is evident the range of the 'similar' responses being 3 to 5 out of 15 possible responses in 95 samples out of 100. (Table 5) but the significance of the factor is explained by the following table:

$$M_O = 4.44; \quad M_e = 7.50$$
$$\sigma M_O = \quad .28; \quad \sigma M_e = \quad .36$$
$$CR = 6.65 \text{ (Highly significant)}$$

The difference between the two means (M_e - M_o) is highly significant as CR equals to 6.65, meaning thereby the friends are choosing each other from the groups having dissimilar dislikes.

The data on 'likes' and 'dislikes' both suggest that the common interests do not play a significant role in the pairing of friends. But on the contrary the pairs tend to be attracted towards each other possessing dissimilar 'likes' and 'dislikes' both.

II. <u>Mental ability</u>.--

This factor has also been split into two parts -- (1) School achievement; (2) intelligence quotient.

(1) <u>School achievement</u>.-- Out of the 50 pairs, only 25 pairs tend to be similar in their school achievement and with p = .50; σp = .07 the percentage of similar pairs will fall within the range of 32 to 68 in 99 out of 100 samples studied (Table 5).

	S	D
f_o	25	25

Fifty per cent of the frequencies fall on similarity side and the other fifty per cent on dissimilarity side of school achievement, suggest that the difference between the possession of similarity and dissimilarity in the two friends is insignificant, and we can say that neither the similarity nor the dissimilarity play a significant role in paired friendships.

(2) <u>Intelligence quotient</u>.-- The number of pairs (p = .42; σp = .07) similar in I.Q. is still lesser than that possessing similar school achievement (Table 5).

	S	D
f_o	21	29
f_e	25	25

x^2 — 1.0

df — 1

P lies at .30 (Insignificant)

The similarity percentage in intelligence quotient is lesser than the dissimilarity percentage. Therefore, in this subfactor of mental ability also, we do not find any evidence of similarity working in the pairing of friends. But the departure of the f_o from the f_e in favour dissimilarity of intelligence quotients of the two friends, is insignificant, and so the dissimilarity also, is not significant in determining friendships.

Taking into consideration both the subfactors, school achievement and intelligence quotient, we find that similarity and dissimilarity both do not play any part in the pairing phenomenon. The paired friends might or might not be similar in their mental ability. We cannot predict for the establishment of friendships between the two adolescent boys if they are of similar mental ability, neither can we predict the mental ability of one, just by knowing the mental ability of the other friend. The phenomenon of mutual friendships may exist between the adolescents of similar or dissimilar mental abilities. Therefore, the role of this factor also, is insignificant.

III. <u>Extraversion-Introversion.</u>--

The similarity trends of extraversion and introversion have been tallied. This factor have been discussed under heads (1) extravertive trend and (2) introvertive trend.

(1) <u>Extraversion</u>.-- Only 8 pairs have the similar tendency of extraversion, while the remaining 42 pairs (Table 5) are dissimilar in possessing this trend. The range of similar pairs may be set as 3% to 29% in 99 samples out of 100. The significance is evident from the following calculations:

	S	D
f_o	8	42
f_e	25	25
x^2		21.8
df		1

P lies beyond the table (Highly significant)

The dissimilarity percentages are evidently much higher than the similarity ones. The similarity of extraversion is definitely not working in the paired friendships. On the other hand f_o for the dissimilarity of the trend is highly significant. Therefore, we can safely infer that the adolescents with extravertive trend of personality, tend to make friendships with a person who has trends of introversion.

(2) <u>Introversion</u>.-- Regarding this sub-factor also, we find more or less the same tendency, as only 9 pairs with p = .18; σp = .05 (Table 5) are similar in their trend of introversion. The significance is, depicted by the following table:

	S	D
f_o	9	41
f_e	25	25
x^2		19.2
df		1

P lies beyond the table (Highly significant)

The X^2 value on introversion also, suggest the same thing as the data on extraversion suggested. The adolescent boys with introvertive personality trend, tend to make friendships with the persons with extravertive trend.

Reflecting upon the data on both the trends, we find that adolescents with extravertive trends tend to make friendships with adolescents of introvertive trends and vice versa. There is a selection of opposites for the establishment of pairs.

IV. Psychological needs.--

All the pairs do possess same psychological needs and a percentage of similarity exists between the friends (Table 5), and the following calculations have been done to explain its significance:

T.A.T.

$$M_O = 4.48; \qquad M_e = 4.00$$
$$\sigma M_O = .25; \qquad \sigma M_e = .19$$
$$CR = 1.55 \text{ (Insignificant)}$$

S.C.T.

$$M_O = 11.22; \qquad M_e = 9.50$$
$$\sigma M_O = .42; \qquad \sigma M_e = .45$$
$$CR = 2.77 \text{ (Highly significant)}$$

The data on the two tests suggest that the M_O for similarity of needs is definitely higher than the M_e but the difference between the two means is not significant according to the results of T.A.T., whereas it is highly significant from the S.C.T. responses. This means that the two tests do not give us the same and a positive conclusion. The fluctuations might be due to less

projection in the sentence completion test responses, as it has
been given in a group. Moreover, the question of rapport also
arises. The rapport in the case of sentence completion test was
not so well established, as it was in the case of T.A.T. Because
of these two reasons the responses of S.C.T. are less reliable
and are concentrated in a very small area of needs which may have
contributed to a high percentage of similarity of these needs.

However, the similarity of psychological needs among paired
friends remains undecided. It needs further explorations.

V. Sentiments.— Similarity in the trends of sentiments is
observed among 30 pairs (Table 5).

	S	D
f_o	30	20
f_e	50	50
X^2	1.6	
df	1	

P lies at .20 (Insignificant)

The similarity in sentiments in the paired friends is quite
high no doubt, but the departure of f_o from f_e is not significant
as the X^2 value of 1.6 suggests. The paired friends tend to have
similarity of trends of sentiments, but still it does not come
up as a significant factor. We cannot definitely say that the two
friends will tend to have similar trends of sentiments. The per-
centage of similar pairs will be at least 42 and not more than
78 in 90 out of 100 samples studied. The hypothesis of the present
study regarding the similarity of sentiments as an affecting
factor in mutual pairs, does not come true. The similarity of

sentiments between the two friends is not a significant factor.

VI. Depressive State.--

While analysing the T.A.T. responses, phenomenon attracted the attention and the similarities were tabulated for mere satisfaction of curiosity. It is evident from the table 5, that only 21 pairs are in depressive state and possess similarity in this aspect and at least 24% and not more than 60% of the pairs, picked at random, will tend to be similar in this aspect.

	S	D
f_o	21	29
f_e	25	25
x^2		1.0
df		1

P lies at .30 (Insignificant)

The frequencies in similarity though high enough, yet, do not play a significant part as compared to dissimilarity ones. On the other hand, the dissimilarity of the depressive state also, is not significant as the X^2 value is insignificant. The depression seems to be an interpersonal phenomenon, but still we are in the dark about the place of this particular factor unless we know the dynamism of interpersonal relations and also go into the depth analysis of the phenomenon.

VI. Anxiety.--

This is another factor which attracted the attention while analysing the T.A.T. responses. Twentyfive pairs out of fifty, are similar in anxiety state (p = .50; σp = .07).

	S	D
f_o	25	25

The part played by the 'anxiety' state also, remains indeci-
sive. That is, grouping of mutual friends may or may not be
affected by this factor.

Therefore, the similarity and dissimilarity of anxiety state
does not play a significant role. Yet, how it affects, if ever
it affects, or it itself is an effect of mutual interpersonal
relations is a problem for further investigation.

The significance of all the factors is confirmed by means of
X^2 and CR and it is evident that the similarity of sociological
factors are working as it was hypothised. But in case of psycho-
logical factors the hypothesis, that the similarity of the factors
are responsible for mutual relationships, is discredited, as the
X^2 value is not significant in any of them. Hence, taking all the
factors into account we find, that sociological factors are more
important than the psychological factors in the paired friendships.
The similarity of sociological factors is more effective and is
working more significantly as compared to the psychological
factors. Similarity of all the psychological factors has insigni-
ficant place in mutual interpersonal relations. Not even a single
psychological factor is affecting the paired friends significantly
in similar capacity. On the other hand some of the sociological
factors, are highly significant, though not all of them. The sig-
nificant sociological factors are, 'similar language', 'proximity',
'positive behaviour pattern', 'similar culture and living habits'
and 'similar socio-economic status'. Thus, the hypothesis regarding
the sociological factors only comes true.

GRAPH. NO.1. SHOWING PERCENTAGE SIMILARITY OF THE FACTORS UNDERLYING PAIRING OF FRIENDS (BOYS).

Scale - 5, Small Squares = 1 Factor on the axis of X
10. Small Squares = 10 Similarity (Percent) on the axis of Y
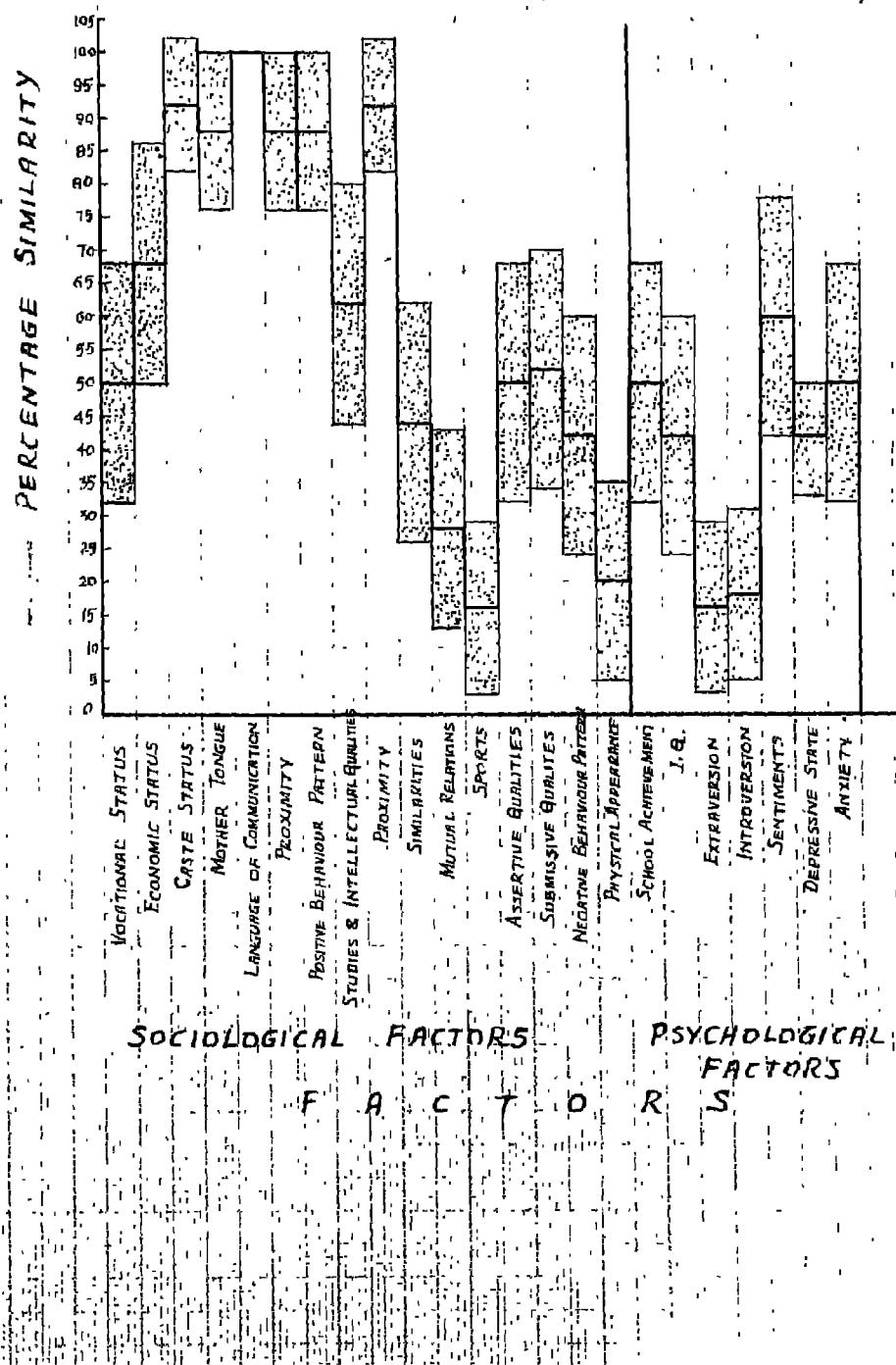
B. Girls

(a) <u>General information of the cases in pairs.--</u>   Out of
the 261 students contacted in various institutions,[1] only 50
pairs have been taken for the study and the general information
about these pairs is as follows:

Table 6. General Information of the Cases Studied (Girls)

Pair No.	Name	Age	Class	Occupation of the guardian	Income of the guardian	Caste	Mother tongue
1	2	3	4	5	6	7	8
1. (a)	M. Watal	15	XI	Excise Insp.	400	Kashmiri	Kashmiri
(b)	Manju Jain	15	XI	Business	700	Hindu	Hindi
2. (a)	Renuka Suri	16	XI	Chief Auditor	400	Hindu	Punjabi
(b)	Sumati Sharma	15	XI	Salesman	100	Hindu	Hindi
3. (a)	Nishat Hadi	16	XI	Commissioner	800 to 1000	Muslim	Urdu
(b)	Anjuli Sur	16	XI	Retired	Below 100	Hindu	Hindi
4. (a)	Surjeet Kaur	16	XI	Service in Fort	-do-	-do-	Punjabi
(b)	Prem Km Arora	16	XI	Contractor	250 to 300	-do-	-do-
5. (a)	Chandra Kanta Khera	16	XI	Cloth Merchant	Above 500	-do-	-do-
(b)	Rehana Khan	15	XI	Timber "	Above 500	Muslim	Urdu
6. (a)	Leela Sriv.	15	XI	Officer	Above 500	Hindu	Hindi
(b)	Leena Chatterji	15	XI	Officer	Above 500	Hindu	Bengali
7. (a)	Aysha Farukhi	16	XI	M.P.	Above 500	Muslim	Urdu
(b)	Kaneez Haider	15	XI	Tailoring etc	Below 100	-do-	-do-
8. (a)	Usha Sriv.	15	XI	A.G. Office service	150 to 200	Hindu	Hindi
(b)	Kiran Sriv.	15	XI	-do-	200 or above	do	-do-
9. (a)	Jeet Km Khattri	16	XI	Business	500 to 600	-do-	-do-
(b)	Kamla Sharma	15	XI	-do-	About 600	-do-	-do-

(Continued)

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[1] See page 45

Table 6. (continued)

1	2	3	4	5	6	7	8
10. (a)	Mithilesh Sinha	15	XI	Lawyer	Above 300	Hindu	Hindi
(b)	Usha Sriv	16	XI	Farm	200 to 300	-do-	-do-
11. (a)	Madhu Sriv.	15	XI	Typist(PVT)	150 to 200	-do-	-do-
(b)	Shail Agarwal	16	XI	Service(Clerk)	About 200	-do-	-do-
12. (a)	Geeta Malviya	15	XI	Business	-	-do-	-do-
(b)	Suman Lata Kapoor	15	XI	Nothing	-	-do-	-do-
13. (a)	Madhu Mehta	15	XI	Gazetted Officer	Above 500	Gujrati Hindu	Gujrati
(b)	Shyam Kishori Singh	15	XI	Jewellers	200 to 300	Hindu	Hindi
14. (a)	Karuna Sand	17	XI	Govt.Service	500 & above	-do-	-do-
(b)	Sudha Kapoor	16	XI	-do-	-do-	-do-	-do-
15. (a)	Abha Tandon	15	XI	Nothing	50 to 60	-do-	-do-
(b)	Santosh Mehrotra	15	XI	Service	100 to 150	-do-	-do-
16. (a)	Suman Sriv.	15	XI	Business	200 to 300	-do-	-do-
(b)	Maya Tandon	16	XI	Clerk	200	-do-	-do-
17. (a)	Rajni Tandon	17	XI	Service	200 to 300	-do-	-do-
(b)	Shashi Tandon	16	XI	Service & Business	500 & above	-do-	-do-
18. (a)	Asha Sriv.	16	XI	Business	100 or below	-do-	-do-
(b)	Sheela Sriv.	15	XI	Office clerk	150 to 200	-do-	-do-
19. (a)	Meera Tandon	15	XI	Cashier	200 to 300	-do-	-do-
(b)	Laxmi Purwar	16	XI	Broker	200 to 250	-do-	-do-
20. (a)	Shakuntala Seth	15	XI	Doctor	Above 500	-do-	-do-
(b)	Nirmala Tandon	15	XI	Booking clerk	200 to 250	-do-	-do-
21. (a)	Vimlesh Dhawan	16	XI	Hakim	About 100	-do-	-do-
(b)	Rajeshwari Mehrotra	15	XI	A.G.Office	200 to 250	-do-	-do-
22. (a)	Farjana Nishat	16	XI	Advocate	500 & above	Muslim	Urdu
(b)	Mavis Hilt	17	XI	Retd. T.T.E.	Below 100	Christian	Hindi

Table 6. (Continued)

1	2	3	4	5	6	7	8
23.	(a) Pushpa Prasad	17	XI	Preacher	-	Christian	Hindi
	(b) Suzana Parmar	15	XI	Headmaster	200 to 250	-do-	-do-
24.	(a) Mehar Afroz	16	XI	Rly. Clerk	150 to 200	Muslim	Urdu
	(b) Vinod Kumari	15	XI	Military	Above 300	Hindu	Hindi
25.	(a) Kadambri	15	XI	Serivice	300 to 400	-do-	-do-
	(b) Purnima	15	XI	Inspector	300 to 400	-do-	-do-
26.	(a) Neerja	16	XI	Professor	400 to 500	Hindu	-do-
	(b) Shobha Khanna	15	XI	-do-	300 to 350	-do-	-do-
27.	(a) Manjul Rani	15	XI	Press	Above 500	-do-	-do-
	(b) Manju	16	XI	Radio	500	-do-	-do-
28.	(a) Kamlesh Km.	17	XI	Business Business	200 to 300	-do-	-do-
	(b) Usha Gurwaraha	16	XI	Govt. Service	200 to 250	-do-	-do-
29.	(a) Shashi Chaturvedi	15	X	Rly. clerk	200	-do-	-do-
	(b) Prakash Gaur	15	X	-do-	150 to 200	-do-	-do-
30.	(a) Rani Dung	15	X	Business	300 to 400	-do-	-do-
	(b) Raj Kumari	15	X	Service	200	-do-	-do-
31.	(a) Kamla Gupta	15	X	-do-	150 to 200	-do-	-do-
	(b) Vimla Shukla	15	X	-do-	150 to 200	-do-	-do-
32.	(a) Daisy Mallick	15	X	Pension	100 to 150	-do-	Bengali
	(b) Kamlesh Sapru	16	X	Service	About 200	-do-	Hindi
33.	(a) Suman Saxena	16	XI	Lawyer	300 & Above	-do-	-do-
	(b) Sneh Lata	16	XI	-do-	-do-	-do-	-do-
34.	(a) Shanti Gupta	16	XI	Business	300 to 400	-do-	-do-
	(b) Mohini Sriv.	16	XI	Service	200 to 250	-do-	-do-
35.	(a) Buddho Kumari	15	XI	Lawyer	200 to 400	-do-	-do-
	(b) Saloni Tiwari	15	XI	Teacher	About 150	-do-	-do-

Table 6. (Continued)

1	2	3	4	5	6	7	8
36.	(a) Ranno Kumari	18	XI	Service	Below 100	Sch. caste	Hindi
	(b) Indira Kumar	16	XI	Business	Below 100	-do-	-do-
37.	(a) Shail Sahai	16	XI	Retd.	200 to 250	Hindu	-do-
	(b) Meenu Agarwal	15	XI	Advocate	400 to 500	-do-	-do-
38.	(a) Kanak Bhatnagar	17	XI	Business	400 to 500	-do-	-do-
	(b) Shakuntala Misra	16	XI	Serivice	About 300	-do-	-do-
39.	(a) Bharati Dixit	16	XI	Lecturer	300 to 400	-do-	-do-
	(b) Pratima Agar.	15	XI	Business	About 300	-do-	-do-
40.	(a) Mridula Agar.	15	XI	Service	200 to 300	-do-	-do-
	(b) Saroj Sharma	16	XI	Excise Inspector	300 to 400	-do-	-do-
41.	(a) Rekha Rani	15	XI	Pension	About 100	-do-	Bengali
	(b) Shipra Roy	15	XI	Retd.	150	-do-	-do-
42.	(a) Usha Kapoor	15	X	Business	Below 100	-do-	Hindi
	(b) Vimla Khanna	16	X	-do-	90 to 100	-do-	-do-
43.	(a) Usha Gandhi	15	X	Clerk	About 100	-do-	Punjabi
	(b) Kailash Dhawan	16	X	-do-	-do-	-do-	-do-
44.	(a) Urmila Sriv.	15	X	A.G. Office clerk	About 150	-do-	Hindi
	(b) Sarla Misra	15	X	Press	100 to 150	-do-	-do-
45.	(a) Lavleen Sharma	15	X	Business	Below 100	-do-	-do- Punja
	(b) Madhuri Purwar	16	X	-do-	500 to 600	-do-	-do- Hin
46.	(a) Kailash Kumari	15	X	-do-	100 to 150	-do-	Punjabi
	(b) Kanta Devi	16	X	-do-	100 to 150	-do-	-do-
47.	(a) Indu Verma	15	X	Principal	300 to 400	Hindu	Hindi
	(b) Meera Saxena	15	X	Farm	About 100	-do-	-do-

(Continued)

Table 6. (Continued)

1	2	3	4	5	6	7	8
48. (a)	Pushpa Agarwal	16	XI	Business	About 500	Hindu	Hindi
(b)	Krishna Jaiswal	15	XI	-do-	-do-	-do-	-do-
49. (a)	Deepali Ghosh	18	XI	Pension	About 100	-do-	Bengali
(b)	Rothika Sarkar	15	XI	Retd.	Below 100	-do-	-do-
50. (a)	Reena	16	XI	Doctor	300 to 400	-do-	-do-
(b)	Shakuntala	16	XI	Artist	100	-do-	Hindi

(b) <u>Sociological information.</u>-- The data for the girls group is analysed in the same way, as it has been done with the boys group, taking the sociological and psychological factors separately. The information about the sociological factors is given in the following table:-

(c) <u>Analysis and interpretation of sociological factors.</u>--

I. <u>Socio-economic status.</u>-- Only 21 pairs possess 100%
similarity in the socio-economic status, i.e., their guardians
are engaged in similar vocation, having similar economic status
and of the same caste status. Not even a single pair is observed
as having no similarity in any of these three deriving subfactors
(Table 7). The significance of this factor is evident by the
following Chi-square table:

	V	E	C
f_O	23	35	50
f_e	25	25	25
x^2		29.16	
df		2	

P lies beyond .01 limit (Highly significant)

Taking all the subfactors for socio-economic status together
we find x^2 is 29.16 and P is beyond the table and is highly sig-
nificant, leading us to an inference that the similarity percen-
tages for friends are not equally divided over the three sub-
factors of vocational, economic, and caste status. This means
that all of these do not contribute to the same extent towards
the pairing of friends.

Spliting the socio-economic status into three subfactors
we find the following results:

(1) <u>Vocational status.</u>-- Out of 50 pairs, only 23 pairs
are the wards of the persons engaged in similar vocation (Table
7).

	S	D
f_o	46	54
f_e	41	59

X^2 .88

df   1

P lies between .50 - .30 (Insignificant)

The similarity percentages are apparently lesser than the dissimilarity ones, and suggest that the wards of persons engaged in similar vocation do not necessarily tend to become friends. The range of similar pairs in this area is 28% to 64% in 99 samples out of 100. The dissimilarity of the vocational status of guardians also, is not a significantly affecting factor for mutual friendships, as the X^2 value (.88) in favour of dissimilarity is not significant.

(2) _Economic status._— Thirty five pairs come from similar economic status as is evident from table 7 (p = .70; σp = .06, i.e., the least percentage of similar pairs will be 55 and will not be more than 85 at .01 level of confidence), and the significance calculated is as follows:-

	S	D
f_o	70	30
f_e	46	54

X^2 22.2

df   1

P lies beyond the table (Highly significant)

The sub-factor of economic status, as the similarity per-
centage suggests, is a highly significant factor. The girls
coming from homes of similar economic background tend to be
friends.

(3) Caste status.--

All the fifty pairs of girls have the similarity of caste
status. Coming from the similar caste status is definitely a
significant factor in pairing of friends.

Hence, the adolescent girls coming from similar socio-
economic status tend to be friends, though the vocational status
similarity in them is insignificant. The two friends might not
come from the homes engaged in similar vocations, but if there
is similarity of economic status and caste status they tend to
be friends. In other words, out of the three subfactors, simi-
larity of economic status (X^2 = 22.2) and similarity of caste
status make a highly significant contribution to the pairing of
friends while the factor of vocational status is not significant
(X^2 = .88). It may, however, be observed that because of the
contribution of the first two sub-factors, the role of the
socio-economic factor as a whole has become significant.

II. Language.-- Out of the 50 pairs studied, 39 pairs are
hundred percent similar in this factor (Table 7). The factor is
investigated under two heads - (1) mother tongue; (2) language
of communication.

(1) Mother tongue.-- There are 11 pairs observed having
dissimilarity in mother tongue (Table 7), and with σp = .06 we

find that in 99 samples out of 100, there will be at least 63% and not more than 93% pairs similar in their mother tongue.

	S	D
f_o	78	22
f_e	53	47
x^2		25.1
df		1

P lies beyond the table (Highly significant)

The x^2 table suggests that the departure of f_o from f_e is highly significant. This means that similarity of mother tongue plays an important role in the pairing of friends.

(2) <u>Language of communication.</u> -- is the same among all the 50 pairs.

Above statistics lead us to an inference that similarity of language plays an important part in mutual friendships.

III. <u>Culture and living habits.</u> --

All the pairs do possess a certain percentage of similarity in this factor as is evident from table 7. With mean equal to 12.78 and $\sigma M = .34$ we find that there will be 12 to 13 'yes' responses out of 17 in 95 samples out of 100 studied. But the significance is obvious from the following table:

$$M_o = 12.78; \quad M_e = 8.50$$
$$\sigma M_o = .34; \quad \sigma M_e = .40$$
$$CR = 8.23 \text{ (Highly significant)}$$

The mean observed for the similarity scores is higher than the mean expected and the difference between the two means

$(M_O - M_e)$ is highly significant, the CR being 8.23. This leads us to say that the similarity of culture and living habits has an important part to play in mutual relations. In other words, similarity of cultural tastes and similarity of living habits leads adolescent girls to become friends. The factor is highly significant.

IV. <u>Proximity</u>.-- Out of 50 pairs, 31 pairs come from families knowing each other, and the remaining 19 pairs are only class-fellows (Table 7).

	S	D
f_O	81	19
f_e	50	50
x^2		37.2
df		1

P lies beyond the table (Highly significant)

The 'proximity' factor as an attracting agent is highly significant as the above analysis shows. The data on this factor have been observed on two sub-factors, viz., being classfellows and family friends. The x^2 value (37.2) is highly significant proving proximity as an affecting agent in the pairing of two friends. Therefore, proximity is an important attracting factor for mutual friendships.

V. <u>Physical appearance and other contributing factors</u>.--

With the assumption that two adolescent girls are attracted mutually by physical appearance, a brief description of the best friend was demanded by the questionnaire. The description of the best friend gave the data on physical appearance, and at the

same time there was a perception of other attracting elements also. Apart from this description, a direct question regarding the causes of their friendship in the questionnaire (Q. No. 14) and interview also, brought a few affecting factors. All these enumerations, together with physical appearance were pooled toge- ther, grouped under the following ten heads and analysed as in the case of boys:-

    (i) Positive behaviour pattern

   (ii) Studies and intellectual qualities

  (iii) Proximity

   (iv) Similarities

    (v) Mutual relations

   (vi) Sports

  (vii) Assertive qualities

 (viii) Submissive qualities

   (ix) Negative behaviour pattern

    (x) Physical appearance

    The whole list of responses is given in Appendix H.

    (i) Positive behaviour pattern.-- The factor includes the enumeration of those behaviour patterns or types of the behaviour which are positive in nature, e.g., 'good behaviour', 'good manners', 'talks nicely', 'behaves properly', 'sincerity', etc. There are 49 pairs who enumerate it as an attracting element in their friendship with σ_p = .02 at least 93% pairs will tend to perceive this quality as a basis of their friendship in 99 out of 100 samples if studied (Table 7).

	S	D
f_o	49	1
f_e	25	25

x^2 44.0

df   1

P lies beyond the table (Highly significant)

In the group of girls the behaviour pattern seems to be the most important and affecting factor. The departure of f_o from f_e is highly significant in favour of it as an affecting agent. Out of fifty pairs there is only one pair which does not enumerate the behaviour pattern as an attracting element in their friendships. Keeping in view the other factors we can infer that even proximity, similarity of language or socio-economic status etc., recede into the background, if the behaviour pattern is positive and the two adolescent girls tend to be attracted to each other and become friends. Good behaviour, sincerity, nice way of talking and behaviour attract the adolescent girls mutually. The positive behaviour pattern, therefore, is a significant basis for mutual relationships.

(ii) Studies and intellectual qualities.— The factor includes those qualities which are intellectual in nature, e.g., 'good at studies', 'wise', 'intelligent', 'writes good essays', 'poetess', etc. Among 42 pairs it seems to be an attracting element, as is evident from table 7, and the significance is obvious from the following calculations:

	S	D
f_o	42	8
f_e	25	25
x^2		21.8
df		1

P lies beyond the table (Highly significant)

The studies and intellectual qualities are highly significant elements in mutual attraction among adolescent girls, though it is insignificant among boys.[1] The x^2 value indicates that it is definitely a significant affecting factor in the pairing phenomenon, and the girls tend to admire and appreciate the intellectual qualities of each other. Here it will not be out of place to mention the conclusions regarding the 'mental ability similarity (page 7(-/07). The similarity of mental ability between the two friends is not significant, or in other words, the paired friends are not definitely on equal level of mental ability and this conclusion leads us to infer that it is not the similarity of studies and intellectual qualities which is working significantly but perhaps the admiration and appreciation of one another is attracting them to mutual pairing as this particular factor is the outcome of the perceptions or impressions of the two friends and not based on objective data. Hence, we infer that the studies and intellectual qualities is a highly significant attracting factor for pairing of friends.

(iii) <u>Proximity</u>.-- The questionnaire was limited only to the proximity of being class-fellows and coming from families

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[1] Page 68

knowing each other, but the interview revealed a few other sub-factors for proximity and so this factor has been taken under separate heading. The proximity here includes - 'nearness of houses', 'same mohallas', 'coming from same village', 'some distant relations', etc. Only 15 pairs have not enumerated this particular factor as affecting their friendship (Table 7).

	S	D
f_o	35	15
f_e	25	25
x^2	7.2	
df	1	

P lies beyond the table (Highly significant)

The x^2 value for the factor as an attracting element is highly significant and the result confirms the results of the 'proximity' factor[1] derived from the responses to the questionnaire. Not only the questionnaire responses prove the factor's significance, but the students' own enumeration of proximity also evidently show its importance as an affecting agent for pairing phenomenon. As p equals to .70 with $\sigma p = .06$, it is understood that at least 55% and not more than 85% of the pairs will be attracted by proximity if picked up at random in 99 samples out of 100.

(iv) <u>Similarities</u>.-- The group includes all kinds of similarities - intellectual, socio-economic, interests or nature etc., enumerated by the pupils themselves. Out of 50 pairs, 29 pairs (Table 7) appear to perceive similarities among themselves

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[1] Page 94

in some elements, and the range of such pairs will be between
40% to 76% with p = .58; σp = .07.

	S	D
f_o	29	21
f_e	25	25
x^2		1.0
df		1

P lies at .03 (Insignificant)

Though the enumeration for this factor as an affecting one
is more than for it as not affecting, we find it an insignificant
factor with x^2 value of 1.0. Therefore, we cannot say that it is
a significant factor for attracting the two friends together,
but still we cannot ignore the perception of the 'similarities'
between themselves. Here again a deeper analysis of the element
is required. The perceived similarities genuinely exist or it
is just a phenomenon of 'suggestion', 'sympathy' or 'prejudice'.

Hence, the factor though not working significantly needs
a deeper analysis, for more definite conclusions.

(v) Mutual relations.-- The factor includes the responses
such as 'mutual help in studies, or knitting, embroidery work',
'mutual help in solving some problems', 'exchanging books' etc.
There is an enumeration of this factor in 20 pairs (Table 7),
out of the 50 pairs studied.

	S	D
f_o	20	30
f_e	25	25

x^2	1.6
df	1

P lies at .20 (Insignificant)

Though impressions for mutual relations or understanding
as a factor working for their friendships have been enumerated,
yet statistically the factor is not significant. There will be
at least 22% and not more than 58% pairs who will tend to enume-
rate this basis of their friendship. Hence we can infer that
'mutual help' might not be a significant attracting factor but
it is in focus of some pairs and has got to be studied experimen-
tally before an inference is arrived at.

(vi) <u>Sports</u>.-- Out of the 50 pairs studied, only 3 pairs
have mentioned the sports as one of the affecting elements and
therefore not more than 14% of pairs will enumerate it in 99 out
of 100 samples.

	S	D
f_o	3	47
f_e	25	25

x^2	36.9
df	1

P lies beyond the table (Highly significant)

The factor, though attracted the attention of a very small
number of pairs, had to be treated statistically, and gives the

result that it is an insignificant factor as an affecting element.
The paired friends do not tend to be attracted to each other due
to this factor. 'Sports' might be a good factor for attracting a
larger group, but so far as mutual attraction is concerned it is
not an important factor.

(vii) <u>Assertive qualities</u>.-- Includes the enumeration of
those qualities which are assertive in nature, e.g., 'bold',
'popular', 'active' etc. Among 36 pairs (Table 7) this factor
seems to be an attracting element, and the significance is
evident from the following chi-square table.

	S	D
f_o	36	14
f_e	25	25
x^2	8.8	
df	1	

P lies beyond the table (Highly significant)

The 'assertive qualities' serves as a highly significant
attracting factor for pairing of adolescent girls. The 'asser-
tive qualities' and 'studies and intellectual qualities[1] both
seem to be highly significant factors for mutual attractions.
At least 57% and at the most 87% of pairs will perceive this
factor as the basis of their friendship, as $p = .72$; $\sigma p = .06$
suggest. But the phenomenon is still in the dark unless we study
objectively these two admired qualities together with the dynamism
of mutual relations. For better understanding and more definite
results the 'dynamism' of 'mutual relations' ought to be investi-

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[1] Pages 96 and 97

gated.

    (viii) <u>Submissive qualities</u>.— The factor includes all the
enumerations of just the opposite of the 'assertive qualities',
e.g., 'submissive nature', 'modest', 'humble', 'obedient' etc.
Out of 50 pairs, the element seems to be attracting 30 pairs
(Table 7) but the significance is stated as follows:

	S	D
f_o	30	20
f_e	25	25
X^2		1.6
df		1

P lies at .20 (Insignificant)

    The frequencies for the factor as an affecting element are
higher than for it as a not affecting one, but the departure of
f_o from f_e is not significant with X^2 = 1.6. Therefore, the
factor, though perceived by the friends, is not a 'significant'
one. The range of pairs will be of 42% to 78% in 99 samples out
of 100 with σp = .07. If we consider these qualities together
with the 'assertive' ones we are again faced with the problem of
dynamism of 'mutual interpersonal phenomenon'.

    (ix) <u>Negative behaviour pattern</u>.—   The factor
includes the enumeration of the behaviour which are negative
in nature, e.g., 'mischiefs', 'teasing', 'telling lies', etc.
Among twenty three pairs (Table 7) the factor seems to be
affecting.

	S	D
f_o	23	27
f_e	25	25

x^2	1.8
df	1

P lies at .20 (Insignificant)

The frequencies for the factor as an affecting one are less than the not affecting ones, suggest that the factor is not significant. But as we know perception is there and will always be there at least in 28% to 64% pairs if picked up at random and leads us to think about the nature of the working of this factor.

(x) <u>Physical appearance</u>.-- The factor is attracting 25 pairs (Table 7), out of 50 pairs studied.

	S	D
f_o	25	25

The frequencies are 50% on the either side of the factor as an attracting and not attracting element. The difference is zero. The factor impress upon some of the paired friends no doubt, but its significance remains indecisive. As compared to boys' group, it is definitely more important among the pairs of girls as an attracting factor.

All the factors enumerated and perceived by the paired friends as affecting their friendships, working significantly or insignificantly, lead us to a new problem of dynamism and their definite place in the mutual relations.

(d) <u>Psychological information</u>.-- The information regarding the psychological factors, of all the fifty pairs, have been tabulated as follows:-

(e) <u>Analysis and interpretation of psychological factors</u>.--

I. <u>Interests</u>.-- The factor has been further sub-divided under two heads: (1) likes; (2) dislikes.

(1) <u>Likes</u>.-- All the pairs do possess certain percentage of similarity of likes as the table 8 suggests and there will be 13 to 15 similar responses out of 29 in 95 samples out of 100, but significance of the factor can be explained by the following calculations:

$$M_O = 13.90; \quad M_e = 14.50$$
$$^GM_O = .54; \quad ^GM_e = .69$$
$$CR = .68 \text{ (Insignificant)} \quad \bullet$$

The M_O for the similarity scores of 'likes' is 13.90 and the difference between the two means $(M_e - M_O)$ .60 is insignificant with CR value of .68. The M_O apparently indicates that similarity of likes do not work but the M_e also is not significantly higher than M_O which leads us to say that dissimilarity also is not working. Neither similarity nor dissimilarity of likes is important. Hence the inference is that the paired friends may or may not have similar or dissimilar likes. There is no definite proportion or definite rule for the likes to be present in similarity or dissimilarity among the paired friends.

(2) <u>Dislikes</u>.-- Similarity of 'dislikes' also is present in all the pairs to some extent as is obvious from table 8, and the 'similar' responses will be 4 to 5 out of 15 maximum responses in 95 samples out of 100, but whether the factor is relevant or not is evident from the following calculations:

$$M_o = 4.52; \quad M_e = 7.50$$
$$\sigma M_o = .29; \quad \sigma M_e = .36$$
$$CR = 6.48 \text{ (Highly significant)}$$

The difference between the two means ($M_e - M_o$) is highly significant (CR = 6.48) in favour of mean expected meaning thereby, the pairs tend to have dissimilar dislikes, i.e., their dislikes are not similar. It is the dissimilarity which is important here and not similarity.

On the whole, taking the 'likes' and 'dislikes' both into consideration, we find that the pairs do not tend to possess similar 'likes' or 'dislikes'. The pairs do not have common interests. In other words common interests do not necessarily lead two adolescent girls to be mutually attracted.

II. <u>Mental ability</u>.-- This factor also has been split into two parts: (1) School achievement; (2) intelligence quotient.

(1) <u>School achievement</u>.-- Out of 50 pairs observed 24 pairs (Table 8) tend to be similar in school achievement:

	S	D
f_o	24	26
f_e	25	25
x^2	.2	
df	1	

P lies between .70 - .50 (Insignificant)

The f_o for similarity is less than those on dissimilarity side. Therefore, similarity of school achievement does not work in pairing of friendships. Paired friends do not tend to be

similar in school achievement, but dissimilarity also is not significant as the X^2 value suggests. Hence the part played by school achievement is indecisive. Paired friends need not necessarily be of similar level in their school achievement. Only 30% (of .03 [?]) will be similar in this factor if we pick up pairs at random in 99 samples out of 100. Therefore, similarity of school achievement is not a significant factor.

(2) <u>Intelligence quotient</u>.-- Similarity of intelligence quotient has been observed in 26 pairs (Table 8).

	S	D
f_o	26	24
f_e	25	25
X^2		.2
df		1

P lies between .70 - .50 (Insignificant)

Though similarity percentages are higher than dissimilarity ones, yet the departure of the f_o from the f_e is not significant with X^2 value of .2. Therefore, the similarity of intelligence is not a determining factor for mutual attractions. The pairs are not necessarily of the same level of intelligence. There will not be more than 70% and less than 34% of such pairs in 99 samples out of 100.

Mental ability, therefore, is not a determining factor in pairing of friends. The mutually attracted adolescent girls may or may not belong to similar level of mental ability.

III. <u>Extraversion-introversion</u>.-- This factor also is studied under two separate heads: (1) extravertive trend; (2) introvertive

trend.

(1) Extraversion.-- Only 4 pairs (Table 8) tend to be similar in extravertive trend, and there will always be only 18% of pairs at the most who tend to be similar in this trend in 99 samples, if we take 100 samples for study.

	S	D
f_o	4	46
f_e	25	25
x^2		33.6
df		1

P lies beyond the table (Highly significant)

The data suggest that the adolescent girls with extravertive trend, tend to choose friends from the group possessing different trends from extraversion. High significance of x^2 value for dissimilarity of extraversion between the pairs suggest that the opposites tend to be attracted mutually.

(2) Introversion.-- The factor is working only in 17 pairs, as is evident from table 8, and at least 16% and not more than 52% of pairs in 99 samples will possess the similarity of introversion, if we pick up pairs at random from 100 samples.

	S	D
f_o	17	33
f_e	25	25
x^2		4.5
df		1

P lies beyond the table (Highly significant)

The data for introversion also, suggest that the dissimilarity of the trend is significant. The girls with introvertive trend have a tendency to find friends who are of extravertive type.

If we compare the data on extraversion and introversion, we find that extravertive type of girls tend to pair with the introvertive types but the introvertive types have comparatively lesser tendency to choose friends from the extravertive group. This tendency might be due to the fact, that, introvertive type, due perhaps to withdrawing nature, cannot attract the extraverts for pairing and they make pairs with the introverts. But still the dissimilarity is significant enough to say that the introverts tend to pair with extraverts, if the situation allows.

IV. Psychological needs.-- All the fifty pairs tend to be similar to some extent in their psychological needs (Table 8) but the similarity is genuinely working in the pairs or not, can be explained by the following calculations:

T.A.T.

$$M_o = 5.20; \quad M_e = 5.00$$
$$\sigma M_o = .28; \quad \sigma M_e = .24$$
$$CR = .54 \text{ (Insignificant)}$$

S.C.T.

$$M_o = 9.74; \quad M_e = 8.00$$
$$\sigma M_o = .42; \quad \sigma M_e = .38$$
$$CR = 3.05 \text{ (Highly significant)}$$

The data available on the two tests (T.A.T. and S.C.T.) is not definite and conclusive just as we find in the case of boys. The pairs of adolescent girls have a tendency to possess a certain

level of similarity of psychological needs, but its significance of in mutual relations remains undecided.

V. <u>Sentiments</u>.-- Out of 50 pairs, 34 pairs tend to be similar (Table 8) in the trend of sentiments and 50% of such pairs will always be found in 99 samples out of 100, and the significance of the factor is evident from the following calculations:

	S	D
f_o	34	16
f_e	25	25
x^2		5.8
df		1

P lies beyond the table (Highly significant)

The similarity of trend of sentiments is a significant factor among the paired friends the x^2 being 5.8. The paired friends have a tendency to possess similar trends of sentiments. The factor is not significant among the boys pairs.

VI. <u>Depressive state</u>.-- Only 13 pairs are similar in this element (Table 8). There will be 11% to 41% pairs only who will be similar in depression state in 99 samples out of 100, if we pick them up at random.

	S	D
f_o	13	37
f_e	25	25
x^2		10.6
df		1

P lies beyond the table (Highly significant)

The dissimilarity of being in a depressive state, is highly significant, the X^2 being 10.6. Therefore, the inference is that the girls who are in depressive state tend to make friends with the opposites. The similarity of depressive state as a factor in pairing is insignificant. The depressive types do not tend to make friends with the depressive ones.

VII. _Anxiety_.-- It is evident from table 8, that 33 pairs tend to be similar in the state of anxiety with $p = .66$ and $\sigma p = .07$ there will always be at least 48% of pairs who will be in similar in anxiety state and this percentage will not exceed 84% in 99 samples out of 100. The significance of the element is exposed by the following calculations:

	S	D
f_o	33	17
f_e	25	25
X^2	4.5	
df	1	

P lies beyond the table (Highly significant)

The 'similarity of anxiety state' between the two friends is a significant factor. The X^2 value is 4.5, that is, it lies beyond the table which shows that the factor is highly significant in determining the pairing phenomenon. The girls who are ~~also~~ in a state of anxiety tend to pair with those who are also in anxiety state. The two adolescent girls with similar tendency of anxiety tend to attract each other.

If we review all the factors briefly, we find that the sociological factors are more important than the psychological

ones, so far as similarity phenomenon is concerned. The paired friends have the similar tendency only in two psychological factors viz., trends of sentiments and state of anxiety. Among the sociological factors all the hypothesized factors play a significant role with a few factors enumerated by the pupils themselves.

GRAPH. NO. 2. SHOWING PERCENTAGE SIMILARITY OF THE FACTORS UNDERLYING PAIRING OF FRIENDS. (GIRLS).

Scale :— 5. Small squares = 1 Factor on the axis of X.
10. Small squares = 10 similarity (Percent) on the axis of Y.

PERCENTAGE SIMILARITY.

SOCIOLOGICAL FACTORS

PSYCHOLOGICAL FACTORS

F A C T O R S
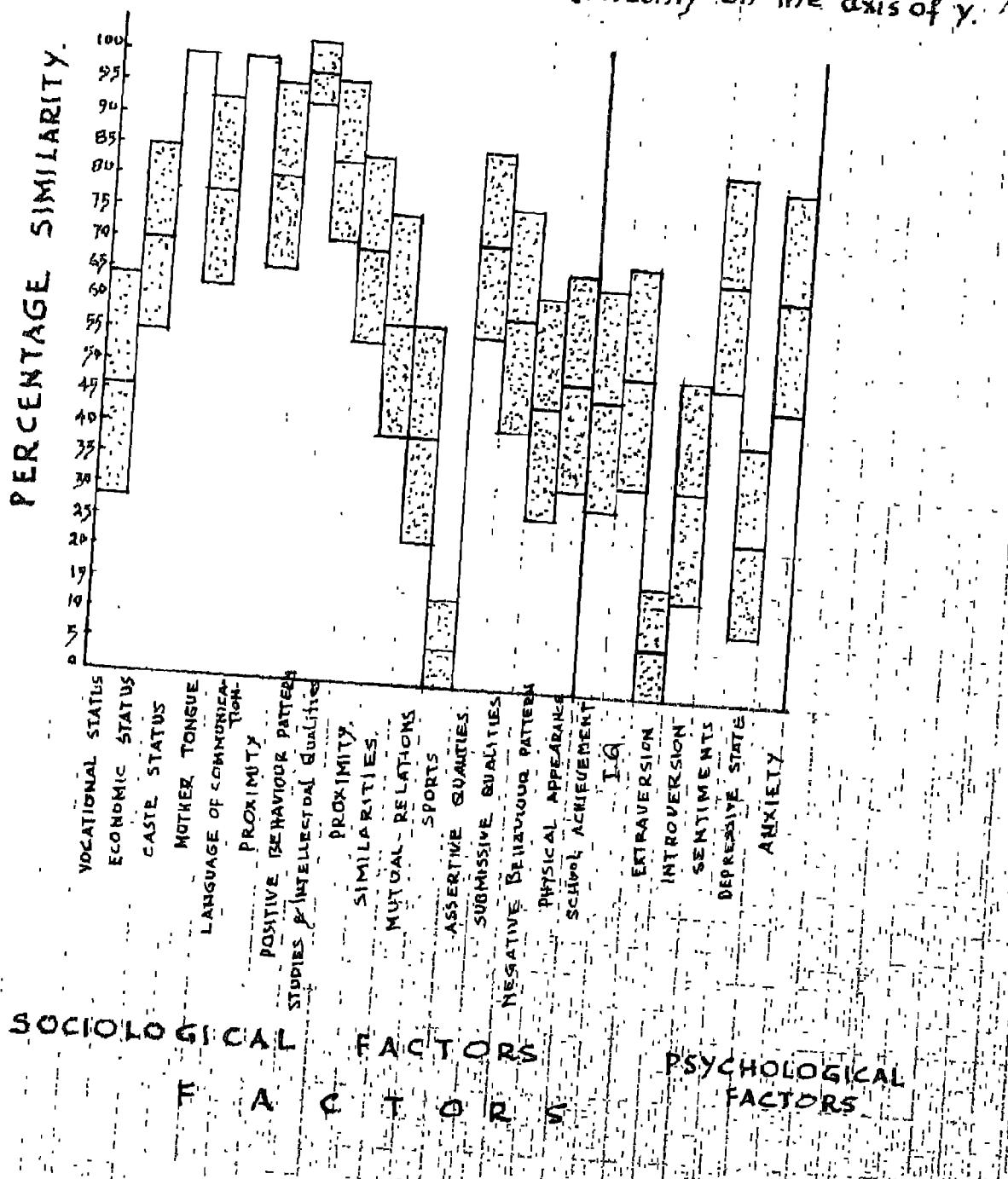
C. Comparison

Analysis of the data with reference to both boys and girls.—

Table 9. Showing the Percentage of Mutual Interpersonal Relations (Boys and girls)[1]

College No.	Percentage of mutual relations (Boys)	College No.	Percentage of mutual relations (Girls)
1	10.0	1	15.5
2	20.0	2	11.1
3	16.7	3	27.9
4	13.9	4	25.0
5	11.1	5	30.0
6	18.4	6	21.1
7	16.0	7	21.4
8	16.7	8	30.4
9	9.7		
10	21.1		
11	15.7		
12	13.0		
Mean	15.2	Mean	22.8
σ	3.6	σ	6.5

Difference   7.6

σ_D 2.5

CR   3.04 (Highly significant)

The above table shows that percentage of mutual relations among girls is higher than that among boys (Mean = 15.2 Boys; 22.8 Girls) meaning thereby, girls have more tendency towards pairing than boys. The CR value (3.04) shows that the difference

[1] Sociograms are given in the Appendix A.

between the two means is highly significant in favour of girls
group, therefore, we can definitely infer that the pairing ten-
dency is found more in them than among boys. This pairing tendency
might be due to social conditions in the country. The girls have
a less opportunity of becoming members of various larger groups
and associations and participate in co-curricular activities.
So the cathection of their energies are withdrawn from larger
groups, from objective world, and centre around a narrower world
of one or two individuals leading to pairing or mutual interper-
sonal relations. On the other hand, boys have greater opportunity
for participating in larger group activities and discharging
their energies to a larger group and to objective world and so
a lower percentage of confining themselves to only one or two
fellow adolescents.

From the graph diagram No. 3 showing the percentage simila-
rity of both boys and girls, we find that the factors are more
or less working in the same fashion in both the groups with slight
deviations. The two curves are deviating in similar fashion. The
relevant data and conclusions derived in Sections A and B of this
chapter, on which the graph is based is presented at one place
under table 10. To elaborate the comparison of the two groups of
boys and girls it may be helpful to take all the factors one by
one, dividing them first into major parts viz., sociological and
psychological factors and then study them under various sub-
heads.

Table 10. Showing the Level of Significance of the Difference between the Similarity of Sociological and Psychological Factors (Girls and Boys).

Factors	p/M (Girls)	p/M (Boys)	Differ-ence	$\sigma D\%/$ σD	C.R.
Sociological Factors					
I - Socio-economic status					
(1) Vocational status	.46	.50	.04	.10	.40
(2) Economic status (a)(b)	.70	.68	.02	.09	.22
(3) Caste status (a)(b)	1.00	.92	.08	.04	2.05*
II - Language					
(1) Mother tongue (a)(b)	.78	.88	.10	.08	1.25
(2) Language of communication (a)(b)	1.00	1.00	0	-	-
III - Culture and living habits (a) (b)	12.78	12.30	.48	.49	.98
IV - Proximity (a)(b)	.81	.88	.07	.07	0
V - Physical appearance and other affecting factors					
(1) Positive behaviour pattern (a)(b)	.98	.88	.10	.05	2.00
(ii) Studies & intellectual qualities (b)	.84	.62	.22	.09	2.44*
(iii) Proximity (a)(b)	.70	.92	.22	.08	2.75**
(iv) Similarities	.58	.44	.14	.09	1.55
(v) Mutual relations	.40	.28	.12	.09	1.33
(vi) Sports	.06	.16	.10	.06	1.66
(vii) Assertive qualities (b)	.72	.50	.22	.10	2.20*
(viii) Submissive qualities	.60	.52	.08	.10	.80
(ix) Negative behaviour pattern	.46	.42	.04	.10	.40
(x) Physical appearance	.50	.20	.30	.10	3.00**

(Continued)

Table 10 (Continued)

Psychological factors

I - Interests

    (1) Likes   13.90   10.62   3.28   .68   4.82**

    (2) Dislikes   4.52   4.44   .08   .42   .19

II - Mental ability

    (1) School achievement   .48   .50   .02   .10   .20

    (2) I.Q.   .52   .42   .10   .10   0

III - Extroversion-introversion

    (1) Extroversion   .08   .16   .08   .06   1.33

    (2) Introversion   .34   .18   .16   .09   1.77

IV - Psychological needs

    (1) T.A.T.   5.20   4.48   .72   .38   1.89

    (2) S.C.T. (a) (b)   9.74   11.22   1.48   .59   2.51*

V - Sentiments (b)   .68   .68   .08   .10   .80

VI - Depressive state   .26   .42   .16   .09   1.77

VII- Anxiety state (b)   .66   .50   .16   .10   1.60

Note:
(1) Table is meant to show whether the factors are working in the
same fashion or not. If the difference between the two means or percen.
is significant then there is a difference of importance in the
two groups. Difference i) significant at 5% level is marked *;
ii) significant at 1% level is marked **.

(2) The factors which are working significantly in the two groups of
boys and girls discussed in Section 'A' and 'B' of this chapter
have been marked as follows:
    i) Significant factor among boys marked as (a)
    ii) Significant factor among girls marked as (b)
    iii) Significant factor among both boys and girls marked as (a)(b).

Sociological factors.--

    I. Socio-economic status.--

(1) Vocational status:

	G	B[1]
p	.46	.50
Difference	.04	
$\sigma_{D_{\%}}$	.10	
CR	.40	(Insignificant)

(2) Economic status:

	G	B
p	.70	.68
Difference	.02	
$\sigma_{D_{\%}}$	.09	
CR	.22	(Insignificant)

(3) Caste status:

	G	B
p	1.00	.92
Difference	.08	
$\sigma_{D_{\%}}$	.04	
CR	2.05	(Significant at 5%)

All the three sub-factors of socio-economic status are not working in similar fashion in the two groups of boys and girls. The importance of vocational and economic status is more or less the same in boys and girls both, as CR values (.40 and .22) are insignificant. It is only caste status the role of which is slightly different in the two groups as the CR value (2.05) is significant at 5% level of confidence.

1/ 'G' and 'B' denote 'Girls' and 'Boys'.

II. Language.--

(1) Mother tongue.--

	G	B
p	.78	.88
Difference	.10	
$\sigma_{D_{\%}}$	.08	
CR	1.25	(Insignificant)

(2) Language of communication is similar in 100% cases among
the pairs of boys and girls both and the difference is zero.
The CR value of the difference between the percentages is xkx-
insignificant. Table 10 suggests that both the groups are signi-
ficantly influenced by the similarity of language for mutual
relations. At the same time, the importance of the factor seems
to be working in the same way and intensity in both the groups.

III. Culture and Living habits.--

	G	B
Mean	12.78	12.30
σ_M	.34	.35
Difference	.48	
σ_D	.49	
CR	.98	(Insignificant)

The similarity of the factor is significantly working in
both the groups (Table 10). We find a very slight difference of
its importance in the two groups. The CR value of difference
between the two mean percentage of similarity is insignificant.
Therefore, the similarity of 'culture and living habits' is
equally important as an affecting factor in the pairing of both
boys and girls.

IV. <u>Proximity.</u>--

	G	B
P	.81	.88
Difference	.07	
$\sigma D_{\cancel{g}}$	.07	
CR	0	(Insignificant)

The factor is significantly working in both the groups of boys and girls (Table 10) and its importance also is the same as the CR value of difference between the percentages is insignificant. The mutual relations are affected in similar way in the two groups.

V. <u>Physical appearance and other contributing factors.</u>--
The sub-factors dealt here are the students' own enumerations during interview, responses to a direct question in the questionnaire and a brief description of the best friend. Several enumerations of factors have been grouped under ten heads:

(i) Positive behaviour pattern.

(ii) Studies and intellectual qualities.

(iii) Proximity.

(iv) Similarities.

(v) Mutual relations.

(vi) Sports.

(vii) Assertive qualities.

(viii) Submissive qualities.

(ix) Negative behaviour pattern.

(x) Physical appearance.

List given in Appendix H.

(1) <u>Positive behaviour pattern</u>.-- Includes the enumeration of behaviour pattern like - 'good behaviour'; 'nice behaviour'; 'good manners'; 'disciplined'; etc.

	G	B
p	.98	.88
Difference	.10	
$\sigma_{D\%}$	.05	
CR	2.00	(Insignificant)

The factor is working significantly (Table 10) and with the same importance in both the groups of boys and girls. The difference between the proportions is not significant, meaning thereby, the importance of the factor for both boys' and girls' mutual relations is very much similar.

(ii) <u>Studies and intellectual qualities</u>.-- The factor consists of the enumerations of the qualities which are intel- lectual in nature and the qualities related to studies, such as 'good at studies', 'very studious', 'wise', 'intelligent', etc.

	G	B
Mean	.84	.62
Difference	.22	
$\sigma_{D\%}$	.09	
CR	2.44	(Significant at 5%)

The difference is significant between the two percentages in favour of girls, meaning thereby, the factor is working differently in the two groups. The girls are more attracted by studies and intellectual qualities of their paired friends than boys. Moreover, the factor is insignificant in boys' mutual

relations but the factor is highly significant (Table 10) among
mutual relationship of girls. The significant difference (at 5%
level of confidence) here, in favour of girls, confirms that the
factor is definitely important among girls pairs.

(iii) Proximity.-- The factor here is inclusive of various
responses of the students related to nearness of 'town', 'village',
'muhalla' or a 'distant relation', 'sitting together in classroom',
coming and going together to village, etc.

	G	B
p	.70	.92
Difference	.22	
$\sigma_{D_\%}$	.08	
CR	2.75	(Highly significant)

The difference between the two percentages is highly sig-
nificant. Therefore, the boys are more attracted mutually by
the 'proximity' factor than girls. Though the factor is working
significantly in the pairing of boys and girls both (Table 10),
yet the importance is much more greater among boys' pairs than
among girls' pairs, and the importance is highly significant.
This conclusion is not in conformity with the results of the
'proximity' (page 119) computed from the responses of the
questionnaire. The reason might be due to the range covered by
the two terms. In the questionnaire the proximity denotes only
the 'nearness' of being 'class-fellows' and 'nearness' of coming
from 'families' known to each other, but the factor derived from
the students' own enumerations include many kinds of proximity.
The girls due to the social conditions in our country do not

have the opportunity of other kinds of proximity like 'going
to cinema together', 'going for an evening walk together', 'going
to sports together', etc. Such items are working among boys and
not among girls. This is the reason why we find that 'proximity'
has a little weight in girls' friendships. Therefore, though the
factor is highly significant in pairing in both boys and girls,
yet only the weight varies.

(iv) <u>Similarities</u>.-- The factor denotes all kinds of
similarities enumerated by the students e.g., 'similar nature',
'similar school achievement', 'similar tastes', etc.

	G	B
p	.58	.44
Difference	.14	
$\sigma_{D\%}$	.09	
CR	1.55	(Insignificant)

Though perception of similarities is there, yet the factor
is insignificant for pairing among both boys and girls (Table 10).
The insignificant working of the factor is equally important in
both the groups, as the difference between the percentages is
insignificant, CR value being 1.55. Therefore, we infer that the
factor has more or less equal weight in both the groups.

(v) <u>Mutual relations</u>.-- The term is used for the enume-
ration of 'mutual help of any kind such as studies, exchanging
books, and other things, 'mutual understanding' etc.

	G	B
p	.40	.28
Difference	.12	
$\sigma D_\%$	.09	
CR	1.33	(Insignificant)

The factor though enumerated by both boys and girls, is not significant (Table 10) and the difference of the two percentages also, is insignificant. Therefore, the factor is working with similar importance in both the groups.

(vi) Sports.-- All kinds of 'sports qualities' enumerated by the students, as an attracting factor in their friendships are included.

	G	B
p	.06	.16
Difference	.10	
$\sigma D_\%$	.06	
CR	1.66	(Insignificant)

The factor, 'Sports' is equally insignificant among both boys and girls pairs (Table 10).

(vii) Assertive qualities.-- It includes the qualities enumerated as: 'bold', 'popular', 'active', etc.

	G	B
p	.72	.50
Difference	.22	
$\sigma D_\%$	.10	
CR	2.20	(Significant at 5%)

This factor, as we find in table 10, is significant among girls pairs but is insignificant among boys pairs. The difference also is significant in favour of girls, but the CR value does not show much difference between the two percentages. The difference is significant only at 5% level of confidence. Therefore, the conclusion we reach, is that though the girls tend to appreciate the assertive qualities of their friends more than the boys do, yet the importance of the factor is not highly significant as compared to boys group.

(viii) <u>Submissive qualities.</u>-- The heading includes all the submissive qualities enumerated as affecting their friendships, e.g., 'submissive', 'quiet', 'humble', 'modest', etc.

	G	B
p	.60	.52
Difference	.08	
$\sigma D_\%$	.10	
CR	.80	(Insignificant)

The difference between the two percentages is insignificant, and it is not significant as an attracting factor also in the pairing of both boys and girls (Table 10). Therefore, the conclusion is that the factor is equally unimportant in both the groups.

(ix) <u>Negative behaviour pattern.</u>-- The term is used for all the behaviour patterns which are negative in nature, .e.g., 'mischiefs', 'teasing', 'telling lies', 'quarrelling', etc.

	G	B
p	.46	.42
Difference	.04	
$\sigma D_\%$	.10	
CR	.40	(Insignificant)

The negative behaviour pattern has been enumerated by some pupils, as an affecting factor, but it is not significant in either groups (Table 10). The difference between the two percentages also is not significant (CR = .40) and this leads us to draw conclusion that the factor is not working significantly in both the groups and is equally unimportant.

(x) Physical appearance

	G	B
p	.50	.20
Difference	.30	
$\sigma D_\%$	.10	
CR	3.00	(Highly significant)

The factor does not show its significance in both the groups (Table 10), but it is working in 50% pairs of girls and is more important among girls than among boys, for mutual attractions. The CR value of 3.00, for the difference between the two percentages, suggests that it is highly significant in favour of girls. Therefore, the conclusion is that physical appearance is much more important as attracting factor among girls pairs than among boys.

Psychological factors.--

    I. Interests: Interests are discussed under two heads:
(i) likes and (ii) dislikes.

    (i) Likes.--

	G	B
Mean	13.90	10.62
σ_M	.54	.42
Difference	3.28	
σ_D	.68	
CR	4.82	(Highly significant)

The similarity of likes is not a significant factor in
both the groups of boys and girls (Table 10), but so far as
importance is concerned, it is found to be of much importance
among girls as compared to boys. The CR value of the difference
between the means of similarity of the two groups is highly
significant in favour of girls. Therefore, though insignificant
to attract both boys and girls, is of much importance in girls'
pairing than in boys' pairing. The similarity of likes between
the paired friends is more important in girls' group than in
boys' group.

    (ii) Dislikes.--

	G	B
Mean	4.52	4.44
σ_M	.31	.28
Difference	.08	
σ_D	.42	
CR	.19	(Insignificant)

The similarity of dislikes as an attracting factor is equally insignificant in both boys' and girls' groups, as the CR value of difference (.19) is insignificant (Table 10).

Keeping in view both 'likes' and 'dislikes' we find that though they are not significant in similar capacity in both the groups, yet 'likes' seem to be more important among girls than among boys, and so far as dislike is concerned, it is equally unimportant in both boys and girls.

II. Mental ability.-- Studied under two heads -- (1) school achievement and (2) intelligence quotient.

(1) School achievement.--

	G	B
p	.48	.50
Difference	.02	
$\sigma_{D\%}$	.10	
CR	.20	(Insignificant)

The CR value of the difference between the percentage similarities is insignificant, meaning thereby, the importance of the factor is the same in both the groups. The similarity of School achievement between paired friends is an equally insignificant factor.

(2) Intelligence quotient.--

	G	B
p	.52	.42
Difference	.10	
$\sigma_{D\%}$	.10	
CR	0	(Insignificant)

The difference between the percentages in this sub-factor of mental ability also, is insignificant. Therefore, the similarity of factor has an insignificant part to play (Table 10) in both boys' and girls' pairs, and at the same time, they have more or less similar weight in friendships. In other words, they are equally unimportant in both the groups.

III. Extraversion-introversion.-- The factor is studied under two heads - (1) extraversion, and (2) introversion.

(1) Extraversion.--

	G	B
p	.08	.16
Difference	.08	
$\sigma D_\%$	.06	
CR	1.33	(Insignificant)

The similarity of extravertive trend also work in similar fashion in the two groups of boys and girls. Importance of the factor is insignificant in the pairing of both boys and girls.

(2) Introversion.--

	G	B
p	.34	.18
Difference	.16	
$\sigma D_\%$	.09	
CR	1.77	(Insignificant)

The similarity of introversion is not a significant factor in the pairing of both boys and girls and the direction of the

tendency also is the same (Table 10). The difference is not so great, as to be a significant one.

Therefore, the factor 'extraversion-introversion' is working in similar fashion in the pairing of both boys and girls.

IV. Psychological needs.-- The needs are studied separately under two heads: (1) psychological needs from T.A.T. responses and (2) psychological needs from S.C.T. responses:

(1) T.A.T.

	G	B
Mean	5.20	4.48
σ_M	.28	.25
Difference	.72	
σ_D	.38	
CR	1.89	(Insignificant)

The difference between the two means is not significant. Therefore, the place of similarity of psychological needs in the two groups is the same with CR value of 1.89.

(2) S.C.T.

	G	B
Mean	9.74	11.22
σ_M	.42	.42
Difference	1.48	
σ_D	.59	
CR	2.51	(Significant at 5%)

The difference between the two means of similarity is significant at 5% level of confidence. Therefore, the similarity

of psychological needs, is not working in similar fashion in the pairing of boys as well as girls.

There is a slight difference between the two tests results. The deviation is perhaps due to the nature of the tests viz., the individual test and group test. There might be lesser projection of needs in the group test. Moreover, the difference between the means of the two groups according to S.C.T. responses is not highly significant (significant only at 5% level of confidence). Therefore, on the whole, we can conclude that the trend in both boys and girls tend to be more or less similar. But the deviating results of the two tests do not lead us to any definite conclusion and suggest for further explorations.

V. Sentiments.--

	G	B
p	.68	.60
Difference	.08	
$\sigma D_\%$	.10	
CR	.80	(Insignificant)

The difference between the two percentages is insignificant. The similarity of the factor is significant in the pairing of girls and is insignificant among boys (Table 10). But the insignificant difference between the similarity suggests that the factor has a similar tendency to affect the pairing of both boys and girls. This similar trend leads us to think that the similarity of sentiments has the same importance among the pairs of boys also. The factor might be investigated further to confirm the conclusions, which are still not very definite.

VI. Depressive State.--

	B	B
p	.26	.42
Difference	.16	
^{0} D$_\%$	.09	
CR	1.77	(Insignificant$\frac{1}{2}$)

The similarity of depressive state in paired boys and girls both is an insignificant factor (Table 10). The CR value (1.77) shows that the factor, if ever working, has a similar place in both the groups of boys' and girls' pairs.

VII. Anxiety State.--

	G	B
p	.66	.50
Difference	.16	
^{0} D$_\%$	.10	
CR	1.60	(Insignificant)

Similarity of anxiety state among girls pairs is working significantly, and among the pairs of boys it is an insignificant factor (Table 10). But the CR value of the difference between the percentages suggests, that, there is no significant difference in the importance of this factor in the two groups. Therefore, we can infer that anxiety state is important in the pairing of boys also, although it does not reach a significant level. However, to be more definite, a comprehensive research in this field is necessary.

Taking the sociological and psychological factors together,

Scale – 5 Small Squares=1 Factor on
the Axis of X
10 Small Squares = 10 Similarity
(Percent) on the axis of Y

PERCENTAGE SIMILARITY

100
95
90
85
80
75
65
60
55
50
45
40
35
30
25
20
15
10
5
0

VOCATIONAL STATUS
ECONOMIC STATUS
CASTE STATUS
MOTHER TONGUE
LANGUAGE OF COMMUNICATION
PROXIMITY
POSITIVE BEHAVIOUR PATTERN
STUDIES & INTELLECTUAL QUALITIES
PROXIMITY
SIMILARITIES
MUTUAL RELATIONS
SPORTS
ASSERTIVE QUALITIES
SUBMISSIVE QUALITIES
NEGATIVE BEHAVIOUR PATTERN
PHYSICAL APPEARANCE
SCHOOL ACHIEVEMENT
I.Q
EXTRAVERSION
INTROVERSION
SENTIMENTS
DEPRESSIVE STATE
ANXIETY.

SOCIOLOGICAL FACTORS   PSYCHOLOGICAL
FACTORS

F A C T O R S

we can say in a nutshell, that the trend is more or less similar
in both the groups of boys and girls, and it is evident by the
graph diagram No. 3, as the curves tend to deviate in a similar
manner, excepting a few factors like 'caste status', 'studies
and intellectual qualities', 'proximity from enumerations of
the students themselves', 'assertive qualities', 'physical
appearance', 'likes' and 'psychological needs for S.C.T. respon-
ses'. Out of these factors the difference is highly significant
only in 'proximity', 'physical appearance' and 'likes'. For other
factors the difference is significant only at 5% level.

Therefore, the general trend is more or less the same in the
pairing of both boys and girls.

D. Selected Case Studies

In this section a few pairs of boys and girls, randomly
selected are examined in detail with a view to confirm the results
arrived at earlier in this chapter. These pairs may be put under
two heads: (1) strong pairs and (ii) weak pairs. Strong pairs
are those who have mentioned only one name frequently, and if
other names are mentioned, they are mentioned in a very casual
way. Weak pairs are those, where one individual is intensely
attracted to the other but the other one does not reciprocate
with same intensity, and the attraction is diverted towards other
figures in the class. The first and third choice made an approxi-
nate division of the strong and weak pairs.

Boys.--

Pair No. 14 (strong pair 15+ / 15+): The vocational status
of the two adolescents' guardians is dissimilar but the economic

and caste status is similar (Table 4). So far as the language is
concerned mothertongue and language of communication of the two
friends are similar. The similarity of the factor 'culture and
living habits' is 9 out of 17 maximum items. The proximity factor
also plays its part in this pair. They seem to be attracted by
assertive qualities and behaviour pattern mostly.

As regards the psychological factors the similarity of
interests, i.e., of likes is 9 out of 29 items and of dislikes is
5 out of 15 items. School achievement is dissimilar but there is
similarity in I.Q. of the two. They have 6 (TAT) and 10 (SCT)[1]
similarity (Table 5) in psychological needs. No similarity in the
trend of extraversion-introversion is observed. But the trend of
sentiments is similar. Similarity in the state of anxiety and
depression also is evident.

Pair No. 17 (weak pair - 17+ / 16+): No similarity in
vocational and economic status of their guardians is noted, though
there is similarity in their caste status (Table 4). Language
factor is similar. The similarity of the factor of 'culture and
living habits' of this pair is 12 out of 17 items. Proximity also
plays its part. Though there is no friendship in their families,
as enumerated by them proximity affects their mutual relations.

Regarding the psychological factors, we find that the simi-
larity in interests (likes and dislikes) is 8 out of 29 and 4
out of 15 items, but there similarity in intelligence quotient
is not evident. The similarity score for psychological needs are
4 (T.A.T.) and 9 (S.C.T.) as table 5 indicates, and no similarity

---

[1] The maximum similarity score for psychological needs reaches 8
in T.A.T. and 19 in S.C.T. responses and the mean similarity
have been calculated on this basis.

is observed in the trend of extraversion-introversion. But there
is similarity in the trend of sentiments and depressive state.

Pair No. 20 (weak pair - 16+ / 17+): The similarity in
socio-economic status is 2 out of 3 sub-factors, in the factor of
'culture and living habits' is 15 out of 17 items (Table 4).
Proximity factor is relevant in this pair also, the two families
know to each other. They have described the submissive qualities
also as affecting their mutual relations.

They have given 10 similar responses in likes and 7 in dis-
likes (Table 5). Regarding mental ability, only school achievement
is similar and no similarity is found in intelligence quotient.
The psychological needs are 5 (T.A.T.) and 9 (S.C.T.) similar
(Table 5). They tend to be similar in sentiments and depressive
states.

Pair No. 22 (strong pair - 16+ / 16+): The similarity of
this pair in socio-economic status is 1 out of 3 sub-factors.
Only language of communication is similar in the factor of lan-
guage. Similarity in the factor 'culture and living habits' is
in 15 items (Table 4). Proximity also seems to be responsible
for the formation of this pair.

The similarity of likes is 14 and the similarity in dislikes
is 10 out of maximum items 29 and 15 respectively. Mental ability
also is similar (both school achievement and I.Q.). The similarity
in psychological needs is 8 (T.A.T.) and 13 (S.C.T.) (Table 5).
But there is no similarity in the trend of extraversion-introver-
sion and sentiments or any other psychological states manifest in
other pairs.

Pair No. 28 (strong pair - 15+ / 15+): No similarity in

socio-economic status. Language factor is similar. The similarity
in 'culture and living habits' is 12 out of 17 items (Table 4).
Proximity does not play any prominent part. They are friends only
in the college, and only that much of proximity prevails.

The similarity of likes and dislikes is 17 and 3 out of 29 and
15 items respectively (Table 5). No similarity in mental ability
is found. The psychological needs manifested show 3 similarity
according to T.A.T. responses and 19 similarity in S.C.T. responses
(Table 5). They are dissimilar regarding the trend of extraversion
and introversion. But similar trends are found in sentiments,
depression and state of anxiety.

Pair No. 34 (weak pair - 15+ / 15+): The socio-economic
status of the pair is similar. Language is also similar. The pair
has similarity in 12 items out of 17 in the factor of 'culture and
living habits' (Table 4). Proximity too is relevant. They them-
selves enumerate 'behaviour pattern' as the most responsible
factor in their friendship.

The similarity in the likes is 12 out of 29 items and in
dislikes is 5 out of 15 items. No similarity in school achievement
is observed though the intelligence quotient of the two adolescents
is similar. The similarity of psychological needs is 5 (T.A.T.)
and 12 (S.C.T.). Similarity is found in the trend of sentiments
and both of them tend to be in a state of anxiety.

Pair No. 41 (weak pair - 16+ / 16+): Socio-economic status
is similar. Language is similar. The similarity in the factor of
'culture and living habits' is 12 out of 17 items (Table 4).
Proximity also plays its role.

The similarity of likes is observed in 13 items out of 29

and of dislikes in 8 out of 15 items. The two friends are dissimilar
in school achievement though intelligence quotient is similar. The
similarity in the psychological needs is 7 (T.A.T.) and 15 (S.C.T.)
as table 5 indicates. They have similar trend in sentiments and
both have the similarity of state of anxiety.

Pair No. 42 (Strong pair - 18+ / 17+): The socio-economic
status is similar. Language factor also is similar. They possess
similarity in 14 items out of 17 in the factor of 'culture and
living habits'. Proximity plays its part. Along with proximity
factor they (in their own version) are attracted by behaviour
pattern and other assertive qualities.

The similarity of likes is in 13 items and of dislikes is in
4 items (Table 5). No similarity in mental ability of the two
friends is manifest. In psychological needs the similarity score is
5 (T.A.T.) and 7 (S.C.T.) in this pair (Table 5). Though both of
them have the tendency of having introvertive trend, no similarity
in trend of sentiments is manifest. They tend to be of depressive
types.

The above discussion of pairs picked up at random from the
fifty pairs of boys shows that though the factors are relevant,
yet, their relevance may be suspected due to no deviation of the
similarity percentage in strong and weak pairs and the suspicion
may lead us to think that there is some other factor also (factor
x) which is responsible for all these pairings (mutual friendships).

Girls.--

Pair No. 1 (strong pair 15+ / 15+): Vocational status and
economic status of the guardians are dissimilar but the caste

status is similar. The mothertongue of the friends is different while the expressing language is the same. The similarity of 'culture and living habits' is in 7 items out of 17 (Table 7). Proximity has little part to play. In their own enumeration, their relationship is affected by behaviour patterns both negative and positive. They enjoy each others' company in mischiefs.

The similarity of likes is in 15 items and of dislikes is in 4 items (Table 8). The mental ability factor is dissimilar. The similarity of psychological needs according to T.A.T. and S.C.T. responses is 3, 9$^{1/}$respectively (Table 8). No similar trends of extraversion-introversion, but trend of sentiments manifests its similarity.

Pair No. 5 (strong pair 16+ / 15+): The socio-economic status is similar. They do not possess similar mothertongue, but the language of communication is similar. 'Culture and living habits' are similar in 10 items out of 17. Proximity is a relevant factor in this case. Behaviour pattern and good looks are effective factors in their mutual attractions.

The likes are similar in 17 items and dislikes are in 3 items (Table 8). Mental ability also tends to be similar (similarity lies in both the sub-factors - school achievement and intelligence quotient). The similarity in the psychological needs is 6 (T.A.T.) and 7 (S.C.T.). The extravertive-introvertive trends do not show similarity. The trends of sentiments are similar. Both the girls are in a state of anxiety.

Pair No. 13 (strong pair 15+ / 15+): They are similar in

1/ The maximum total similarity is 10 (T.A.T.) and 16 (S.C.T.).

caste status only (Table 7). Mothertongue is not similar, but similarity is found in the language of communication. The factor of culture and living habits is similar in 13 items out of 17 (Table 7). So far as proximity is concerned, they are only college friends - no family friendship exists. Behaviour pattern seems to be the most affecting factor in friendship according to their own version.

The similarity of likes is in 15 items and of dislikes if in 8 items (Table 8). As regards 'mental ability' factor, only I.Q. is similar, school achievement is dissimilar. The similarity of psychological needs is 9 (T.A.T.) and 9 (S.C.T.) as table 8 suggests. There is no similarity in the trends of extraversion-introversion, sentiments or any other states manifested by some of the other pairs.

Pair No. 15 (weak pair 15+ / 15+): The vocational and economic status of the guardians of the two friends is dissimilar and the caste status is similar (Table 7). The language factor is similar. Surprisingly, the similarity of the responses regarding the factor of 'culture and living habits' is 17 out of 17 items as table 7 indicates. Proximity factor also is relevant.

The likes are similar in 22 items and dislikes are in 7 items (Table 8). The school achievement is not similar but they manifest the similarity of intelligence quotient. The similarity of psychological needs is 4 out of 10 (T.A.T.) and is 5 out of 16 (S.C.T.) maximum similar needs. Both of them are tending towards introversion and have the similarity in the trends of sentiments.

Pair No. 25 (strong pair 15+ / 15+): The socio-economic status of the two friends is similar. Language factor is similar.

Similarity in culture and living habits is ~~88-23%~~ *in 15 items* (Table 7).
Proximity factor has little part to play. They are only college
friends, no family friendship exists. Behaviour pattern and good
looks are mostly responsible for their mutual attraction.

The similarity in likes is 16 out of 29 and dislikes is 3
out of 15 items (Table 8). School achievement has a tendency to
be similar but intelligence quotient is dissimilar. The similarity
in psychological needs is 9 (T.A.T.) and 10 (S.C.T.) as table 8
indicates. No similarity in the trends of extraversion-introversion
or in sentiments is manifest.

Pair No. 34 (weak pair 16+ / 16+): The similarity in socio-
economic status is in respect of 2 items out of 3. Language is
similar. The similarity of 'culture and living habits' is 17 out
of 17 items (Table 7). Proximity factor has an important part to
play. They are friends not only because of being class-fellows
but the families also know each other. Behaviour pattern attracts
them mostly in their own version.

The interests are similar in respect of 16 items in likes
and 5 items in dislikes (Table 8). Mental ability of the pair is
similar. They have similarity in 3 needs out of 10 (T.A.T.) and
in 11 needs out of 16 (S.C.T.). No similar tendency of being intro-
vertive or extrovertive, but the trend of sentiments tend to be
similar. They have similarity of being in a state of anxiety.

Pair No. 45 (strong pair 15+ / 16+): The vocational status
of the guardians of the two friends is similar, but the economic
status is dissimilar. The caste status is similar. The language
factor of the two girls is similar. The similarity of 'culture

and living habits' is observed in 15 items (Table 7). Proximity factor has only minor part to play as they are together only in the college and the family friendship does not exist. They are more attracted by the behaviour pattern rather than proximity.

The likes are similar in 13 items and dislikes in 5 items (Table 8). The factor 'mental ability' tends to be similar in this case. The similarity in psychological needs is 5 (T.A.T.) and 10 (S.C.T.) similar (Table 8). No similar trends are manifest in extraversion-introversion. But they have similar trends of sentiments and anxiety states.

Pair No. 47 (weak pair 15+ / 15+): The similarity of socio-economic status is observed only in caste status while vocational and economic status of the guardians is dissimilar. Language factor is similar. The similarity in the factor of 'culture and living habits' is in 9 items out of 17. Proximity factor is a relevant one in this case.

Similarity of likes is in 15 items and of dislikes is in 7 items. Similarity in psychological needs is 5 (T.A.T.) and 10 (S.C.T.) as table 8 indicates. Extravertive-introvertive trends do not show any tendency towards similarity. But the similarity is found in sentiments, depressive and anxiety states.

The discussion of individual pairs in the group of girls does not definitely tell us that it is only the similarity of the assumed factors which leads to mutual friendships. Both boys and girls are making pairs because of a certain level of similarity in the assumed factors. Though the study of intensity of friendships is not within the jurisdiction of the present study, yet

friends mentioned as third choice have also been included and studied. (The first and third choice made an approximate division of the strong and weak pairs). The percentage of the similarities of these two types of pairs do not deviate proportionately to the intensity of their mutual attraction. Both the pairs strong and weak might have very high percentage of similarity in one factor and low percentage of similarity in some other factor, irrespective of their intensity of choices. Therefore, there is a strong suspicion of some other factor also operating in their choices besides the factors assumed in the present study. The nature of this factor 'X' is still unknown - it might be either a single factor or a combination of several factors. It may be useful to plan studies to locate this factor more specifically and evaluate its role in the choice of friends.

E. Analysis of data from factorial angle.

In the previous sections we have noted the factors which are significant to a more or less extent in the formation of mutual pairs. In the present section an attempt has been made to study statistically whether these factors operate singly or in association with others and to what extent. The two major parts - sociological and psychological factors are discussed here separately to avoid confusion.

Sociological factors.--

(i) Socio-economic status and Language:

Contingency Table 1 (Boys)

		Language		
		M.T. [1]	L.C. [2]	Total
	Voc. status [3]	22	25	47
Socio-economic status	Eco. status [4]	30	34	64
	Caste status	40	46	86
	Total	92	105	197

C = 0

x^2 = 0

Contingency Table 2 (Girls)

		Language		
		M.T.	L.C.	Total
	Voc. status	20	23	43
Socio-economic status	Eco. status	30	35	65
	Caste status	39	50	89
	Total	89	108	197

C = .02

x^2 = .08

n = 2

P = more than .95

The Chi-square value in both boys and girls indicates that there is no relationship between the two variables -- socio-economic status, and language in the pairing phenomenon of boys as well as of girls.

1/ M.T. - Mothertongue
2/ L.C - Language of Communication or expression.
3/ Voc. status - Vocational status.
4/ Eco. status - Economic status.

(2) <u>Socio-economic status and Culture and living habits.</u>--

Contingency Table 3 (Boys)

		Culture and living habits					
		3-6	6-9	9-12	12-15	15-18	Total
Socio-economic status	Voc. status	1	1	4	12	7	25
	Eco. status	1	2	9	14	8	34
	Caste status	1	2	14	18	11	46
	Total	3	5	27	44	26	105

$$C = .14$$

$$x^2 = 2.09$$

$$n = 8$$

$$P = 0.95$$

Contingency Table 4 (Girls)

		Culture and living habits				
		6-9	9-12	12-15	15-18	Total
Socio-economic status	Voc. status	1	5	11	6	23
	Eco. status	1	9	17	8	35
	Caste status	2	14	22	12	52
	Total	4	28	50	26	110

$$C = -.12$$

$$x^2 = 18.50$$

$$n = 6$$

P lies beyond the table

The calculations of 'C' in boys group - between the two
variables of 'socio-economic status' and 'culture and living
habits' suggest that the factors are working independently. The

X^2 value is 2.09 and P equals to 0.95, meaning thereby, that the chance expectancy does not reach the level of significance of 0.02. Therefore, there is no association between the two variables, rather, there are 95 chances in 100 to work independently.

The 'C' value of the 'socio-economic status' and 'culture and living habits' among girls, on the other hand shows a strong association between the two variables as X^2 = 18.50 and P value goes beyond the table.

Hence, so far as the independent working of factors in pairing is concerned, the two groups differ in the association of the two factors 'Socio-economic status' and 'culture and living habits.'

(3) <u>Socio-economic status and Proximity</u>:

Contingency Table 5 (Boys):

		Proximity		
		cf.[1]	ff.[2]	Total
	Voc. status	25	21	46
Socio-economic status	Eco. status	34	28	62
	Caste status	46	36	82
	Total	105	85	190

C	=	.01
X^2	=	.02
n	=	2
P	=	more than .95

[1] Classfellow.
[2] Family friendship.

Contingency Table 6 (Girls):

		Proximity		
		Cf	FF.	Total
	Voc. status	23	14	37
Socio-economic status	Eco. status	34	22	56
	Caste status	50	31	81
	Total	107	67	174

$$C = 0$$
$$X^2 = 0$$

The 'C' for 'socio-economic status' and 'proximity' -- in both the groups of boys and girls pairs, suggests that the two variables are not related. The X^2 value is not significant for C, therefore, we can say that the factors socio-economic status and proximity are not working together in the pairing of both boys and girls. They are, thus, independent determinants in the pairing phenomenon, of boys as well as of girls.

(4) Socio-economic status and Physical appearance and other contributing factors.--

Contingency Table 7 (Boys):

Physical appearance and other contributing factors

	1	2	3	4	5	6	7	8	9	10	Total
Voc. status	21	18	22	13	9	5	15	14	9	5	131
Socio Eco. status economics	29	22	32	18	11	6	19	20	11	7	175
status Caste status	40	28	43	21	14	9	24	24	19	10	232
Total	90	68	97	52	34	20	58	58	39	22	538

C   = .05

x^2 = 1.35

n   = 18

P more than .75

Contingency Table 8 (Girls):

Physical appearance and other contributing factors

		1	2	3	4	5	6	7	8	9	10	Total
	Voc. status	23	19	13	11	9	2	14	14	8	13	126
Socio-economic status	Eco. status	35	29	26	19	14	2	21	21	15	17	199
	Caste status	49	42	35	28	20	3	36	30	23	25	291
	Total	107	90	74	58	43	7	71	65	46	55	616

C   = .99

x^2 = 30791.03

n   = 18

P lies beyond the table

Keeping in view the values of 'C' and x^2 for the factors 'socio-economic status' and 'physical appearance and other contributing factors' we find that they are working differently in the two groups of boys and girls.

(5) Language and Culture and living habits.--

Contingency Table 9 (Boys):

Culture and living habits.

		3-6	6-9	9-12	12-15	15-18	Total
	M.T.	1	1	11	21	10	44
Language	M.L.C.	1	2	13	22	12	50
	Total	2	3	24	43	22	94

$$C = .06$$

$$X^2 = .34$$

$$n = 4$$

$$P = \text{more than } .95$$

Contingency Table 10 (Girls):

Culture and living habits

		6-9	9-12	12-15	15-18	Total
	M.T.	1	8	18	12	39
Language	L.C.	2	14	22	12	50
	Total	3	22	40	24	89

$$C = .11$$

$$X^2 = 1.09$$

$$n = 3$$

$$P \quad \text{lies between } .80 - .70$$

There seems to be an independent place of the two factors 'culture and living habits' and 'language' in the pairing of friends in both groups of boys and girls. The X^2 values for factors among boys and girls .34 and 1.09 maintain the hypothesis of no relationship

between the two factors. Therefore, similarity of 'language' and similarity of 'culture and living habits' are independent factors among the pairs. Here also, the trend is similar in the groups of boys and girls both.

(6) Language and Proximity.--

Contingency Table 11 (Boys):

Proximity

Language		Cf.	ff.	Total
	M.T.	44	33	77
	L.C.	50	38	88
	Total	94	71	165

$$C = 0$$
$$x^2 = 0$$

Contingency Table 12 (Girls):

Proximity

Language		Cf.	ff.	Total
	M.T.	39	24	63
	L.C.	50	31	81
	Total	89	55	144

$$C = -.01$$
$$x^2 = .01$$
$$n = 1$$
$$P = .90$$

The x^2 value in boys group is zero and therefore, we can conclude that there is no association between the factors of 'proximity' and 'language'. These factors are independent of each other in the girls group also as P is at .90 level, x^2 value being .01. We do not find

any divergence of the results in the two groups of boys and girls.

(7) Language and Physical appearance and other contributing factors.—
Contingency Table 13 (Boys):

Physical appearance and other contributing factors

		1	2	3	4	5	6	7	8	9	10	Total
	M.T.	40	28	41	17	11	4	22	23	18	6	210
Language	L.C.	44	31	46	21	14	8	25	26	21	10	246
	Total	84	59	87	38	25	12	47	49	39	16	456

$$C \quad = .05$$
$$X^2 \quad = 1.14$$
$$n \quad = 9$$
$$P \quad = \text{more than } 99\%$$

Contingency Table 14 (Girls):

Physical appearance and other contributing factors

		1	2	3	4	5	6	7	8	9	10	Total
	M.T.	39	32	28	18	15	1	27	24	16	17	217
Language	L.C.	49	42	35	29	20	3	36	30	23	25	292
	Total	88	74	63	47	35	4	63	54	39	42	509

$$C \quad = .05$$
$$X^2 \quad = 1.28$$
$$n \quad = 9$$
$$P \quad = \text{more than } .05$$

The coefficient of contingency between the factors 'language'
and 'physical appearance and other contributing factors' in the two
groups of boys and girls give same results. In boys group the 'C' is
.05 and X^2 value is 1.14 with more than 99% probability leading us to
the conclusions that there is no relation between the two factors

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under consideration. In the group of girls also the P is larger than .95 and indicates no association between the two factors. Among the pairs of boys and girls both the two factors are working independently.

(8) <u>Culture and living habits and Proximity.</u>--

Contingency Table 15 (Boys):

| | | Proximity | | |
		Cf	ff.	Total
	3 - 6	1		1
	6 - 9	2	2	4
Culture & living habits	9 - 12	13	9	22
	12 - 15	22	17	39
	15 - 18	12	10	22
	Total	50	38	88

$$C = .01 \cdot 10$$
$$x^2 = .89$$
$$n = 4$$
$$P = .95$$

Contingency Table 16 (Girls):

| | | Proximity | | |
		Cf	ff.	Total
	6 - 9	2		2
Culture & Living habits	9 - 12	14	7	21
	12 - 15	22	15	37
	15 - 18	12	9	21
	Total	50	31	81

$$C = .14$$
$$x^2 = 1.62$$
$$n = 3$$
$$P = .70$$

The 'C' for the 'culture and living habits' and 'proximity' in the group of boys is .10 and x^2 equals to .89 with a probability of 95% denoting independence of the two factors. In the group of girls also, the x^2 value of 1.62 brings 70% probability in suggesting the independence of the two factors. Here, in both the groups we find similar trend of the factors 'culture and living habits' and 'proximity' in relation to each other.

(9) <u>Culture and living habits and Physical appearance and other contributing factors.</u>--

Contingency Table 17 (Boys):

Physical appearance and other contributing factors

		1	2	3	4	5	6	7	8	9	10	Total
	3-6	1	1	1	1	1	1	1	1			8
	6-9	1	1	2	2	2		1	1	1		11
Culture & living habits	9-12	13	5	13	3	3	2	7	7	6	3	62
	12-15	18	13	20	12	4	4	10	10	6	3	100
	15-18	11	11	10	4	4	1	6	7	8	4	66
	Total	44	31	46	22	14	8	25	26	21	10	247

$$C = .27$$
$$x^2 = 9.42$$
$$n = 36$$
$$P = .01 \ (\sqrt{2x^2} - \sqrt{2n-1}$$

Contingency Table 18 (Girls):

Physical appearance and other contributing factors

		1	2	3	4	5	6	7	8	9	10	Total
	6-9	2	2	2	1			1	2	1	2	13
Culture & living habits	9-12	13	12	11	8	7	2	10	8	8	9	88
	12-15	22	18	14	13	10		16	11	10	8	122
	15-18	12	11	8	7	3	1	9	9	4	6	70
	Total	49	43	35	29	20	3	36	30	23	25	293

$$C \quad = \quad .17$$

$$X^2 \quad = \quad 8.72$$

$$n \quad = \quad 27$$

$$P \quad = \quad .99 \text{ (the probability even more than 99%)}$$

The Chi square is significant at .01 level among boys, therefore, two variables tend to be associated to each other. The factors, 'culture and living habits' and 'physical appearance and other contributing factors have a tendency to work in association to each other among the boys pairs only and not among the girls' pairs as the Chi square value suggests. The X^2 is lying at 99% in the group of girls indicating the two variables are independent of each other. There is no overlap in these two factors. Thus we find a slight divergence of tendency in the two groups in this combination.

(10) <u>Proximity and Physical appearance and other contributing factors.</u>--
Contingency Table 19 (Boys):

Physical appearance and other contributing factors

		1	2	3	4	5	6	7	8	9	10	Total
	Cf	36	26	36	18	12	6	18	20	18	7	197
Proximity	ff	27	20	27	14	10	4	13	17	14	6	152
	Total	63	46	63	32	22	10	31	37	32	13	349

$$C = .02$$
$$x^2 = .14$$
$$n = 9$$
$$P = \text{more than } 99\%$$

Contingency Table 20 (Girls):

Physical appearance and other contributing factors

		1	2	3	4	5	6	7	8	9	10	Total
	Cf	40	34	28	25	17	3	32	24	18	20	241
Proximity	ff	26	23	16	17	11	2	22	16	11	15	159
	Total	66	57	44	42	28	5	54	40	29	35	400

$$C = .03$$
$$x^2 = .31$$
$$n = 9$$
$$P = \text{more than } 99\%$$

In boys group the x^2 value of .14 for the two variables suggests
that there are 99% or more chances for the factors to be independent
of each other working in the pairing of friends. In the group of
girls also x^2 value is not significant as the P is larger than .99,
meaning thereby, the variables under consideration are not associated

to each other. They are not working together in pairing of friends. Hence, the trend of independence of the two variables 'proximity' and 'physical appearance and other ~~affecting~~ factors' is the same in the two groups of boys and girls.

Psychological factors.--

(1) Likes and Dislikes[1] .--

Contingency Table 21 (Boys):

Dislikes

									Total
	15-24	1	2	5					8
	25-34		1	7	3	3			14
Likes	35-44	1		7	4	4	1		17
	45-54			5			1	2	8
	55-64			1		2			3
	Total	2	3	25	7	9	2	2	50

$$C \quad = \quad .64$$
$$x^2 \quad = \quad 34.69$$
$$n \quad = \quad 24$$

P lies between .10 - .05

[1] The factor 'interest' is studied under two heads viz., 'likes' and 'dislikes' and all the contingency tables will follow taking these two sub-heads as separate independent factors. Therefore, the relation of all the factors with 'likes' first be studied, then with 'dislikes'.

Contingency Table 22 (Girls):

Dislikes

		0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	Total
	25-34	1	1	5		1					8
	35-44		2	10	2	3					17
	45-54		1	4	2	2	1				10
	55-64			8	1		1				10
Likes	65-74		1			1					2
	75-84					1		1			2
	85-94									1	1
	Total	1	5	27	5	8	2	1		1	50

$$C = .31$$

$$X^2 = 95.39$$

$$n = 48$$

P lies beyond the table

The X^2 value for 'C' for 'likes' and 'dislikes' lies somewhere between .10 - .05 level of significance showing that the factors are not related to each other. Therefore, among boys pairs similarity of likes and dislikes work independent of each other. In girls group the X^2 value is highly significant, as the $\sqrt{2x^2} - \sqrt{2n-1}$ equals to 4.11. Therefore, we can say that X^2 is highly significant and the two factors are associated to each other. In this combination we find approximately a similar trend in the two groups of boys' and girls' pairs.

(2) Likes and Mental ability.--

Contingency Table 23 (Boys):

Mental ability

		Sch. Ach. [1]	I.Q.	Total
	15-24	3	3	6
	25-34	9	2	11
Likes	35-44	8	8	16
	45-54	4	6	10
	55-64	1	1	2
	Total	25	20	45

C	=	.30
x^2	=	4.45
n	=	4

P lies between 0.30 - 0.50

Contingency Table 24 (Girls):

Mental ability

		Sch. Ach.	I.Q.	Total
	25-34	6	2	8
	35-44	8	9	17
	45-54	3	5	8
Likes	55-64	5	6	11
	65-74			
	75-84	1	2	3
	85-94	1	1	2
	Total	24	25	49

C	=	.24
x^2	=	2.99
n	=	6

P lies between 0.90 - 0.80

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[1] School achievement.

In the boys group there is no relationship between 'mental ability' and 'likes' as the x^2 value falls between the 50% and 30% level, that is there is 50% to 30% chance of the factors working as independent entities. In the group of girls also, we do not find any relationship between the two factors as chance plays a greater role here as compared to boys group. Therefore, in both the groups of boys and girls pairs the similarity of 'mental ability' and similarity of 'likes' though not playing a significant part (Table 10), if ever working, they are working in independent capacity.

(3) Likes and Extraversion-introversion.--
Contingency Table 25 (Boys):

		Extraversion-introversion		
		Ext.[1]	Int.[2]	Total
	15-24		4	4
	25-34	2	2	4
Likes	35-44	5	2	7
	45-54	1	1	2
	Total	8	9	17

C	=	.49
x^2	=	5.37
n	=	3

P lies between 0.20 to 0.10

[1] Extraversion.
[2] Introversion.

Contingency Table 26 (Girls):

| | | Extraversion-introversion | | |
		Ext.	Int.	Total
	25-34	1	2	3
	35-44	2	7	9
	45-54	1	1	2
Likes	55-64		4	4
	65-74		1	1
	75-84		1	1
	85-94		1	1
	Total	4	17	21

C	=	.37
x^2	=	3.33
n	=	6

P lies between 0.80 and 0.70

The x^2 value for the relationship between the two factors 'likes' and 'extraversion-introversion', suggests that the two variables are working independently, and the hypothesis of no-relationship for them is discredited with P lying between .20 to .10 in the group of boys and with P = 80% to 70% in the groups of girls. Therefore, in both the groups, though insignificant factors in similar capacity (Table 10), are working independently of each other, and trend is the same.

(4) Likes and Psychological needs.--

Here we will study the psychological needs separately from the two tests (T.A.T. and S.C.T.).

Likes and Psychological needs (T.A.T.):

Contingency Table 27 (Boys):

Psychological needs (T.A.T.)

		5-14	15-24	25-34	35-44	45-54	55-64	Total
	15-24		2	6				8
	25-34		3	3	5	3		14
Likes	35-44	2	4	4	4	2	1	17
	45-54		1	4	2	1	1	9
	55-64	1		1				2
	Total	3	10	18	11	6	2	50

$$C = .56$$
$$x^2 = 22.84$$
$$n = 20$$

P lies beyond the table

Contingency Table 28 (Girls):

Psychological needs (T.A.T.)

		0-9	10-19	20-29	30-39	40-49	50-59	60-69	Total
	25-34		1		2	3		2	8
	35-44			3	6	5	1	3	18
	45-54			1	4	2	3		10
Likes	55-64	1		4	2		2		9
	65-74			1	1				2
	75-84		1		1				2
	85-94			1					1
	Total	1	2	10	16	10	6	5	50

$$C = .68$$
$$x^2 = 43.01$$
$$n = 36$$

p lies beyond the table $(\sqrt{2x^2} - \sqrt{2n-1} = 3.35$

The x^2 value is 22.84 for 'C' between the two variables 'likes' and 'psychological needs' in the group of boys, and the relationship is strong as the P lies beyond the table. The hypothesis of no-relationship is discredited in any chance expectancy. Therefore, we find that the 'psychological needs' (according to T.A.T. analysis) and 'likes' are strongly associated and working together. In the group of girls also, x^2 value 43.01 with n = 36 and $\sqrt{2x2} - \sqrt{2n-1}$ equals to 3.35 is highly significant. Therefore, the two variables -- similarity of 'psychological needs' (T.A.T.) and 'likes' is associated to each other. Here we find a similar tendency in both the groups of boys and girls pairs.

(5) Likes and Psychological needs (S.C.T.):

Contingency Table 29 (Boys):

Psychological needs (S.C.T.)

		15-24	25-34	35-44	45-54	55-64	65-74	75-84	Total
	15-24	1	1	2	2	2		1	9
	25-34		3	3	5	2			13
Likes	35-44		2	5	5	4		1	17
	45-54		1	2	3	2	1		9
	55-64					2			2
	Total	1	7	12	15	12	1	2	50

C = .53

x^2 = 19.53

n = 24

P = .70

Contingency Table 30 (Girls):

Psychological needs (S.C.T.)

		10-19	20-29	30-39	40-49	50-59	60-69	70-79	Total
	25-34		3		2	2		1	8
	35-44		3	3	4	4	2		16
	45-54	1		3	6	1	1		12
Likes	55-64			3	3	4			10
	65-74								
	75-84			1	1	1			3
	85-94					1			1
	Total	1	6	10	16	13	3	1	50

$$C = .81$$
$$X = 95.39$$
$$n = 36$$

P = Beyond the table ($\sqrt{2x^2} - \sqrt{2n-1} = 4.11$)

The probability of the 'C' to fall between the 80% and 70% chance leads us to say that there is no relationship between 'likes' and 'psychological needs' as expressed from the S.C.T. The psychological needs from T.A.T. are strongly associated with 'likes'. This difference of result might be due to inadeqqate projection in the S.C.T. This difference of the T.A.T. and S.C.T. is found in boys group only therefore, we can suspect only a lack of projection. In the girls group the X^2 value 95.39, with n = 36 and $\sqrt{2x^2} - \sqrt{2n-1} = 4.11$, is highly significant and the result tallies with that we get from the combination of psychological needs (T.A.T.) and likes. Hence, the trend is definitely different in the two groups of boys and girls. Among boys, the factors are working independently but among girls the two variables are strongly associated.

(6) <u>Likes and Sentiments.--</u>

Contingency Table 31 (Boys):

Sentiments

		A	α	Total
	15-24	4	4	8
	25-34	8	6	14
Likes	35-44	11	6	17
	45-54	7	2	9
	55-64		2	2
	Total	30	80	50

C	=	.29
x^2	=	4.59
n	=	4
P	=	0.30

Contingency Table 32 (Girls):

Sentiments

		A	α	Total
	25-34	5	2	7
	35-44	9	8	17
	45-54	9	3	12
Likes	55-64	7	3	10
	65-74	1		1
	75-84	2		2
	85-94	1		1
	Total	34	16	50

C	=	-.26
x^2	=	3.63
n	=	6

P lies between 0.80 and 0.70

The factors 'likes' and 'sentiments' are working independently as the X^2 value is not significant. The observed results are close to those to be expected on the hypothesis of independence. In the girls group also, P lies between .30 and .70 and the X^2 is not significant. Therefore, there is no real relationship between the two variables in both the groups. In this combination also, we find a similar trend in the two groups.

(7) <u>Likes and Depressive state.</u>--

Depressive State

Likes		A	α	Total
	15-24	6	3	9
	25-34	6	7	13
	35-44	6	11	17
	45-54	3	6	9
	55-64		2	2
	Total	21	29	50

$$C = .28$$
$$X^2 = 4.25$$
$$n = 4$$
$$P = .30$$

Contingency Table 34 (Girls):

		Depressive state		
		A	α	Total
	25-34	1	9	10
	35-44	4	10	14
	45-54	3	9	12
Likes	55-64	3	7	10
	65-74	1		1
	75-84		2	2
	85-94		1	1
	Total	12	38	50

$$C = .32$$
$$X^2 = 5.70$$
$$n = 6$$

P lies between .50 to .30

The X^2 value in the group of boys indicates that the two variables, similarity of 'depressive' state and similarity of 'likes' are independent of each other. The X^2 is not significant as the P lies at .30, and the factors are not associated. Likewise, in the group of girls also, we find the X^2 value not significant to depict the real association between similarity of depressive state and likes. The trend is the same in the two groups. The factors are not significantly working (Table 10), and whatever be the place in the pairing phenomenon (significant or insignificant) they are not in close relationship or in other words -- they are working independently in both the groups of boys and girls.

(8) Likes and Anxiety state.--

Contingency Table 35 (Boys):

		Anxiety		
		A	♂	Total
	15-24	4	4	8
	25-34	6	8	14
Likes	35-44	9	8	17
	45-54	5	4	9
	55-64	1	1	2
	Total	25	25	50

$$C = .09$$
$$x^2 = .41$$
$$n = 4$$
$$P = .98$$

Contingency Table 36 (Girls):

		Anxiety		
		A	♂	Total
	25-34	2	6	8
	35-44	10	6	16
	45-54	9	3	12
	55-64	9	1	10
Likes	65-74	1		1
	75-84	1	1	2
	85-94	1		1
	Total	33	17	50

$$C = .41$$
$$x^2 = 10.10$$
$$n = 6$$
$$P = .10$$

The two tables for boys and girls both suggest that the factors 'anxiety state' and 'likes' are not associated to each other. They are working independently, irrespective of the effect they have created. Among boys the similarity of both the factors is insignificant (Table 10). Among girls pairs the similarity of anxiety state is a significant factor (Table 10) and similarity of likes is insignificant (Table 10) and they are working independently. There is no relationship between the two factors. So far as the relationship between the two variables is concerned the trend in the two groups is similar, and if we see the (Table 10) showing the comparative tendency of the factors we find that the difference between the two percentages (.66 and .60) is insignificant, which confirms the trend of the anxiety state to be similar, but trend in the likes is significantly different. However, so far as the trend of the independence of the two factors is concerned the trend is the same among the pairs of boys as well as girls.

(9) Dislikes and Mental ability.--
Contingency Table 37 (Boys):

| | | Mental ability | | |
		Sch. Ach.	I.Q.	Total
	0-9	1	1	2
	10-19			
	20-29	14	6	20
Dislikes	30-39	2	4	6
	40-49	5	5	10
	50-59	1	2	3
	60-69	2	2	4
	Total	25	20	45

$$C = .28$$
$$X^2 = 3.83$$
$$n = 6$$
$$P = .70$$

Contingency Table 38 (Girls):

Mental ability

		Sch. Ach	I.Q.	Total
	0-9	1		1
	10-19	4	4	8
	20-29	13	12	25
	30-39	3	3	6
Dislikes	40-49	2	2	4
	50-59		2	2
	60-69	1	1	2
	70-79			
	80-89	1	1	2
	Total	25	25	50

$$C = .24$$
$$X^2 = 3.06$$
$$n = 8$$
$$P = .90$$

The X^2 value in the group of boys is insignificant, as P lies at .70. Therefore, 'mental ability' and 'dislikes' are not associated. They are working independently. In the same way, in the group of girls also, the two factors work independent of each other, as the $P = .90$. Both the factors as determinants of mutual relations in similar capacity also, are insignificant (Table 10) among boys as well as among girls. The trend of the two factors tends to be the same in the two groups.

(10) Dislikes and Extraversion-introversion.--

Contingency Table 39 (Boys):

Extraversion-introversion

		Ext.	Int.	Total
	20-29	6	7	13
	30-39	1		1
Dislikes	40-49	1	1	2
	50-59	1		1
	Total	9	8	17

$$C \; = \; .33$$
$$X^2 \; = \; 2.08$$
$$n \; = \; 3$$
$$P \; = \; .50$$

Contingency Table 40 (Girls):

Extraversion-introversion

		Ext.	Int.	Total
	10-19		1	1
	20-29	2	11	13
	30-39			
	40-49	1	4	5
Dislikes	50-59	1		1
	60-69			
	70-79			
	80-89		1	1
	Total	4	17	21

$$C \; = \; .43$$
$$X^2 \; = \; 4.76$$
$$n \; = \; 7$$
$$P \; = \; .70$$

Among boys, P = .50 and so the X^2 value is not significant to show the association in the two variables. In the same way in the group of girls also, X^2 value equals 4.76 and P = .70, leading us to infer that the association is still lesser or the factors are independent of each other. Therefore, we do not find any real association between 'dislikes' and 'extravertive-introvertive trends' in both the groups of boys and girls. The tendency is more or less the same.

(11) Dislikes and Psychological needs (T.A.T.).--
Contingency Table 41 (Boys):

Psychological needs (T.A.T.)

		5-14	15-24	25-34	35-44	45-54	55-64	Total
	0-9		1	1				2
	10-19		1	2				3
	20-29	2	4	9	7	3		25
Dislikes	30-39			1	3	2	1	7
	40-49	1	4	2	1	1		9
	50-59			1	1			2
	60-69			1	1		1	3
	Total	3	10	17	13	6	2	51

$$C = .59$$
$$X^2 = 27.23$$
$$n = 30$$

P lies between .70 - .50

Contingency Table 42 (Girls):

Psychological needs (T.A.T.)

		0-9	10-19	20-29	30-39	40-49	50-59	60-69	Total
	0-9							1	1
	10-19			1	1		1	2	5
	20-29	1	1	7	7	5	4	2	27
	30-39			1	1	3			5
Dislikes	40-49				6	2			8
	50-59				1		1		2
	60-69		1						1
	70-79								
	80-89			1					1
	Total	1	2	10	16	10	6	5	50

$$C = .75$$
$$X = 64.28$$
$$n = 48$$
$$P = (\sqrt{2x^2} - \sqrt{2n-1} = 1.39) \text{ more than } 0.05$$

There is no real association, between the similarity of 'psychological needs' (T.A.T.) and the similarity of 'dislikes' working in their friendships, as the X^2 value (27.23) is not significant (P lying between .70 to .50). The two variables are working independently. Among girls the $\sqrt{2x^2} - \sqrt{2n-1}$ equals to 1.39 and the value is more than .05 meaning thereby, the two factors in consideration are independently working. Hence, so far as comparison of the two groups is concerned they tend to be similar in this aspect. The two factors are working in a similar fashion.

(12) Dislikes and Psychological needs (S.C.T.).--

Contingency Table 43 (Boys):

Psychological needs (S.C.T.)

Dislikes		15-24	25-34	35-44	45-54	55-64	65-74	75-84	Total
	0-9			1	1				2
	10-19	1				2			3
	20-29		4	7	9	4		1	25
	30-39		1	2	3	1			7
	40-49		2	2	2	3			9
	50-59						1	1	2
	60-69		1			1			2
	Total	1	8	12	15	11	1	2	50

$$C = .75$$

$$x^2 = 64.29$$

$$n = 36$$

$$P = .02 \ (\sqrt{2x^2} - \sqrt{2n-1} = 2.97)$$

Contingency Table 44 (Girls):

Psychological needs (S.C.T.)

		10-19	20-29	30-39	40-49	50-59	60-69	70-79	Total
	0-9				1				1
	10-19				3	1	1		5
	20-29		6	6	7	7	1		27
	30-39			1	2	1	1		5
Dislikes	40-49	1		2	2	2		1	8
	50-59			1	1				2
	60-69					1			1
	70-79								
	80-89					1			1
	Total	1	6	10	16	13	3	1	50

$$C \quad = \quad .62$$

$$x^2 \quad = \quad 31.22$$

$$n \quad = \quad 48$$

$$P \quad = .1 \ (\sqrt{2x^2} - \sqrt{2n-1} \ = 1.846)$$

The x^2 value is significant on .02 level in the group of boys to say that the factors tend to work in association. But in the group of girls the x^2 value does not reach the level of significance. Therefore, the two factors in consideration are working independently. Here, the trend is slightly different in the two groups of boys and girls.

(13) <u>Dislikes and Sentiments.</u>--

Contingency Table 45 (Boys):

		Sentiments		
		A	d	Total
	0-9	2		2
	10-19	1	2	3
	20-29	13	12	25
Dislikes	30-39	6	1	7
	40-49	6	3	9
	50-59	1	1	2
	60-69	1	1	2
	Total	30	20	50

$$C = .97$$
$$x^2 = 796.02$$
$$n = 6$$

P lies beyond the table

Contingency Table 46 (Girls):

		Sentiments		
		A	d	Total
	0-9	1		1
	10-19	2	3	5
	20-29	18	9	27
	30-39	4	1	5
	40-49	6	2	8
Dislikes	50-59	1	1	2
	60-69	1		1
	70-79			
	80-89	1		1
	Total	34	16	50

$$C = .27$$
$$x^2 = 3.93$$
$$n = 8$$
$$p = .90$$

The two variables 'sentiments' and 'dislikes' are working in association with each other in both the groups of boys and girls, as the x^2 value is significant with P beyond the table. But there is no association between these two factors in the group of girls. The trend is not the same in the two groups.

(14) Dislikes and Depressive state.--

Contingency Table 47 (Boys):

Depressive state

		A	d	Total
	0-9	2		2
	10-19	2	1	3
	20-29	8	17	25
Dislikes	30-39	5	2	7
	40-49	4	5	9
	50-59		2	2
	60-69		2	2
	Total	21	29	50

C	=	.41
x^2	=	10.10
n	=	6
P	=	.10

Contingency Table 48 (Girls):

Depressive state

		A	α	Total
	0-9		1	1
	10-19	1	4	5
	20-29	7	20	27
	30-39	1	4	5
Dislikes	40-49	4	4	8
	50-59		2	2
	60-69		1	1
	70-79			
	80-89		1	1
	Total	13	37	50

$$C = .28$$
$$X^2 = 4.25$$
$$n = 8$$
$$P = .80$$

The contingency table 47 suggests that among boys the two factors 'sentiments' and 'depressive state' though working insignificantly (Table 10) are independent of each other. There are 10% chances of the factors to be independent of each other. The X^2 value does not reach the level of significance to indicate a real association between the two factors. Similarly, among girls, the chance expectency plays even a greater role, the P being equal to .80. The two factors in consideration in girls pairs also, are working independently. There is no real relationship between the two variables in both the groups and so the trend tends to be similar.

(75) Dislikes and Anxiety state.—

Contingency Table 49 (Boys):

Dislikes		Anxiety		
		A	α	Total
	0-9	1	1	2
	10-19	2	1	3
	20-29	11	14	25
	30-39	6	1	7
Dislikes	40-49	2	7	9
	50-59	2		2
	60-69	1	1	2
	Total	25	25	50

C	=	.39
x^2	=	8.97
n	=	6
P	=	.20

Contingency Table 50 (Girls):

Dislikes		Anxiety		
		A	α	Total
	0-9		1	1
	10-19	4	1	5
	20-29	16	11	27
	30-39	5		5
Dislikes	40-49	5	3	8
	50-59	1	1	2
	60-69	1		1
	70-79			
	80-89	1		1
	Total	33	17	50

C	=	.58
x^2	=	25.35
n	=	8

P lies beyond the table.

The x^2 value (8.97), for the independence of the factors --
'abilities' and 'anxiety state', suggests that the two variables
are not associated to each other. They are working independently
though both are insignificant (Table 10) in similar capacity as
affecting mutual relationships among boys. The X^2 value (25.35)
in the group of girls is significant, so the two factors in consi-
deration here work in association. The tendency of the factors for
working independently indicates that the trend is not the same in
the pairing of boys and girls.

(16) Mental ability and Extraversion-introversion.--
Contingency Table 51 (Boys):

		Extroversion-introversion		
		Ext.	Int.	Total
	Sch. Ach.	4	4	8
Mental ability	I.Q.	4	3	7
	Total	8	7	15

C = .07
X^2 = .25
n = 1
P lies between .70 - .50

Contingency Table 52 (Girls):

		Extraversion-introversion		
		Ext.	Int.	Total
	Sch. Ach.		8	8
Mental ability	I.Q.	1	10	11
	Total	1	18	19

C = .20
X^2 = .79
n = 1
P = .50

In both the groups of boys and girls, the X^2 value is not significant. There is no real association between the two variables in both the groups. The similarity of 'mental ability' and similarity of trends of 'extroversion-introversion' though insignificant factors in the phenomenon of mutual relations, yet whatever be the role they play, they play it independently. The trend (Table 10 and the contingency tables 51 and 52 show) is approximately the same in boys and girls both.

(17) Mental ability and Psychological needs (T.A.T.)

Contingency Table 53 (Boys):

Psychological needs (T.A.T.)

		5-14	15-24	25-34	35-44	45-54	55-64	Total
Mental ability	Sch. Ach.	2	4	7	5	5	2	25
	I.Q.	1	4	7	4	2	2	20
	Total	3	8	14	9	7	4	45

$$C = .16$$
$$X^2 = 1.18$$
$$n = 5$$
$$P = .95$$

Contingency Table 54 (Girls):

Psychological needs (T.A.T.)

		0-9	10-19	20-29	30-39	40-49	50-59	60-69	Total
Mental ability	Sch. Ach.		1	3	7	6	3	4	24
	I.Q.	1	1	5	8	4	3	3	25
	Total	1	2	8	15	10	6	7	49

$$C = .20$$
$$X^2 = 2.15$$
$$n = 6$$
$$P = .90$$

The factors 'mental ability' and 'psychological needs' are working independently in boys' as well as in girls' group. The X^2 value is insignificant, P being equal to .95 and .90 in the two groups of boys and girls respectively. Therefore, we can infer firstly that there is no real relationship between the two and secondly the tendency is similar among both boys and girls pairing phenomenon.

(12) Mental ability & Psychological needs (S.C.T.).--

Contingency Table 55 (Boys):

Psychological needs (S.C.T.)

		25-34	35-44	45-54	55-64	65-74	75-84	Total
Mental ability	Sch. Ach.	5	5	9	4		1	24
	I.Q.	3	7	4	5	1	1	21
	Total	8	12	13	9	1	2	45

$$C = .27$$
$$X^2 = 3.54$$
$$n = 5$$
$$P = .70 - .50$$

Contingency Table 56 (Girls):

Psychological needs (S.C.T.)

		10-19	20-29	30-39	40-49	50-59	60-69	70-79	Total
Mental ability	Sch. Ach.	1	3	2	9	6	2	1	24
	I.Q.		4	5	6	7	3		25
	Total	1	7	7	15	13	5	1	49

$$C = .71$$
$$X^2 = 49.81$$
$$n = 6$$

P lies beyond the table

The variables 'mental ability' and 'psychological needs (S.C.T.)' are not working in association with each other in the

groups of boys but the relation of the two factors is significant in the group of girls.

(19) Mental ability and Sentiments.--

Contingency Table 57 (Boys):

		Sentiments		
		A	α	Total
Mental ability	Sch. Ach	13	12	25
	I.Q.	12	8	20
	Total	25	20	45

$$C = .08$$
$$X^2 = .29$$
$$n = 1$$
$$P = .70 - .50$$

Contingency Table 58 (Girls):

		Sentiments		
		A	α	Total
Mental ability	Sch. Ach.	13	11	24
	I.Q.	20	5	25
	Total	33	16	49

$$C = .27$$
$$X^2 = 3.85$$
$$n = 1$$
$$P = .05$$

In the group of boys the X^2 value lies between .70 - .50 and is not significant to indicate a real association between 'mental ability' and 'sentiments', i.e., the two variables are not working together. The factors under consideration are associated with each other in the group of girls. They are not independent variables. The X^2 value reaches the 5% level of significance. Hence, the trend

is ^not^ similar in both the groups of boys and girls.

(20) <u>Mental ability and Depressive state.</u>--

Contingency Table 59 (Boys):

		Depressive state		
		A	ð	Total
Mental ability	Sch. Ach.	11	14	25
	I.Q.	7	13	20
	Total	18	27	45

$$C = .09$$
$$X^2 = .37$$
$$n = 1$$

P lies between .70 - .50

Contingency Table 60 (Girls):

		Depressive state		
		A	ð	Total
Mental ability	Sch. Ach.	4	20	24
	I.Q.	6	19	25
	Total	10	39	49

$$C = .09$$
$$X^2 = .40$$
$$n = 1$$
$$P = .50$$

We do not find any difference of tendency regarding association in the two groups of boys and girls. In the group of boys the two variables are independent of each other as the X^2 value is .37 and P is between .70 and .50. There is no real association between the two factors -- 'mental ability' and 'depressive state' as related to pairing phenomenon. In the group of girls also the X^2 value (.09) is insignificant, as the P equals to .50, the two factors are working

independently of each other. Thus in this combination we find same trend in the two groups of boys and girls.

(21) <u>Mental ability and Anxiety state.</u>--

Contingency Table 61 (Boys):

		Anxiety		
		A	α	Total
	Sch. Ach.	10	16	26
Mental ability	I.Q.	10	10	20
	Total	20	26	46

$$C = .11$$
$$X^2 = .56$$
$$n = 1$$
$$P = .50$$

Contingency Table 62 (Girls):

		Anxiety		
		A	α	Total
	Sch. Ach.	18	6	24
Mental ability	I.Q.	19	6	25
	Total	37	12	49

$$C = .01$$
$$X^2 = .005$$
$$n = 1$$

P lies between .95 - .90

The X^2 value in the group of boys is .56 with P equal to .50 i.e., the chi-square is not significant to indicate that the factors are not associated to each other. And the X^2 value of .01 with P lying between .95 and .90, does not give any indication of association. Therefore, the inference is that mental ability and anxiety are not working, in association in both the groups of boys and girls.

(22) <u>Extraversion-introversion & Psychological needs</u> (T.A.T.).—

Contingency Table 63 (Boys):

Psychological needs (T.A.T.)

		5-14	15-24	25-34	35-44	45-54	Total
Extraversion-introversion	Ext.	1	1	3		3	8
	Int.		3	5	1		9
	Total	1	4	8	1	3	17

$$C = .52$$
$$X^2 = 6.30$$
$$n = 4$$

P lies between .30 - .20

Contingency Table 64 (Girls):

Psychological needs (T.A.T.)

		10-19	20-29	30-39	40-49	50-59	60-69	Total
Extraversion-introversion	Ext.	1		2		1		4
	Int.		6	7	2		2	17
	Total	1	6	9	2	1	2	21

$$C = .58$$
$$X^2 = 10.65$$
$$n = 5$$
$$P = .10 - .05$$

In the group of boys the similarity of extravertive-introvertive trend in the paired friends is not working in association with the similarity of psychological needs. The two variables, if ever have any place in the pairing phenomenon, are independent of each other. But in the group of girls the two factors tend to show some association as P lies between .10 - .05, i.e., they are dependent variables in the pairing phenomenon if ever they have any place.

(23) Extraversion-introversion and Psychological needs (S.C.T.).--

Contingency Table 65 (Boys):

Psychological needs (S.C.T.)

		25-34	35-44	45-54	55-64	65-74	75-84	Total
Extraversion-introversion	Ext.	1	1	4	1		1	8
	Int.	3	3	1	2			9
	Total	4	4	5	3		1	17

$$C = .48$$
$$x^2 = 5.09$$
$$n = 5$$
$$P = .50 - .30$$

Contingency Table 66 (Girls):

Psychological needs (S.C.T.)

		20-29	30-39	40-49	50-59	60-69	70-79	Total
Extraversion-introversion	Ext.		1	2	1			4
	Int.	3	3	3	6	1	1	17
	Total	3	4	5	7	1	1	21

$$C = .34$$
$$x^2 = 2.74$$
$$n = 5$$
$$P = .80$$

The two factors, 'extraversion-introversion' and 'psychological needs' from S.C.T., according to the above contingency tables do not show any association between themselves, in both the groups of boys and girls. Here we find similar tendency in the two groups. Hence, regarding the independence of the factors extraversion-introversion and psychological needs according to T.A.T. and S.C.T. responses, the definite conclusions are still in the dark.

(24) Extraversion-introversion and Sentiments.--

Contingency Table 67 (Boys):

Sentiments

		A	d	Total
	Ext.	5	3	8
Extraversion-introversion	Int.	3	6	9
	Total	8	9	17

$$C = .28$$
$$\chi^2 = 1.45$$
$$n = 1$$
$$P = .20$$

Contingency Table 68 (Girls):

Sentiments

		A	d	Total
	Ext.	3	1	4
Extraversion-introversion	Int.	12	5	17
	Total	15	6	21

$$C = .04$$
$$\chi^2 = .03$$
$$n = 1$$
$$P = .90 - .80$$

The chi-square value, in the group of boys, for the independence of 'sentiments' and 'extraversion-introversion' of 1.45 with P = .20 indicates that the factors are working independently, though they are insignificant factors (Table 10) in the pairing of boys. The factors 'similarity of sentiments' and 'similarity of extraversion-introversion' in the group of girls also are not associated to each other as the chi-square value lies between .90 - .80. Therefore, in the two groups the two factors in consideration are independent variables.

(25) Extraversion-introversion and Depressive state.--

Contingency Table 69 (Boys):

Depressive state

		A	α	Total
	Ext.	1	7	8
Extraversion-introversion	Int.	3	6	9
	Total	4	13	17

$$C = .24$$
$$X^2 = 1.04$$
$$n = 1$$
$$P = .30$$

Contingency Table 70 (Girls):

Depressive state

		A	α	Total
	Ext.	1	3	4
Extraversion-introversion	Int.	9	8	17
	Total	10	11	21

$$C = .21$$
$$X^2 = 12.53$$
$$n = 1$$

P lies beyond the table

The similarity of 'depressive state' and 'extraversion-introversion' among boys pairs are independent variables as the chi-square value does not reach the level of significance. On the other hand among the girls pairs the two factors in consideration have the tendency to be dependent, or say they are strongly associated.

(26) Extraversion-introversion and Anxiety state.--

Contingency Table 71 (Boys):

Anxiety

		A	α	Total
Extraversion-introversion	Ext.	2	6	8
	Int.	4	5	9
	Total	6	11	17

$$C = .20$$
$$x^2 = .71$$
$$n = 1$$
$$P = .50 - .30$$

Contingency Table 72 (Girls):

Anxiety

		A	α	Total
Extraversion-introversion	Ext.	2	2	4
	Int.	12	5	17
	Total	14	7	21

$$C = .17$$
$$x^2 = .62$$
$$n = 1$$
$$P = .50$$

Among the group of boys there is no overlap of the two factors--
'similarity of anxiety state' and 'similarity of extroversion-
introversion' as the x^2 value is not significant with P lying
between .50 - .30, therefore, the two factors are independent
variables in the pairing phenomenon of boys. In the case of pairs
of girls also the factors are independent variables, as the x^2
value does not reach the level of significance, rather P lies at
.50. Hence, the combination of the two factors is working in the
same way in the two groups of boys and girls.

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(27) Psychological needs (T.A.T. and S.C.T.).--

Contingency Table 73 (Boys):

Psychological needs (S.C.T.)

		15-24	25-34	35-44	45-54	55-64	65-74	75-84	Total
	5-14		2	1		1			4
	15-24	1	2	3	1	3			10
Psycho-logical needs (TAT)	25-34		1	4	5	6		2	18
	35-44		2	3	5		1		11
	45-54			1	5				6
	55-64		1			1			2
	Total	1	8	12	16	11	1	2	51

$$C = .63$$
$$X^2 = 33.56$$
$$n = 30$$
$$P = .30$$

Contingency Table 74 (Girls):

Psychological needs (S.C.T.)

		10-19	20-29	30-39	40-49	50-59	60-69	70-79	Total
	0-9				1				1
	10-19					2			2
	20-29			3	2	5			10
Psycho-logical needs (TAT)	30-39		2	4	5	3	1	1	16
	40-49	1	3	1	1	3	1		10
	50-59			2	4				6
	60-69		1		3		1		5
	Total	1	6	10	16	13	3	1	50

$$C = .64$$
$$X^2 = 34.69$$
$$n = 36$$
$$P = .92 \quad (\sqrt{2x^2} - \sqrt{2n-1} = .09)$$

The similarity of 'psychological needs' (T.A.T.) and similarity of 'psychological needs' (S.C.T.) taken as two variables lead us to infer that they are not associated as the chi-square in both the groups is not significant. The independence of the variables, we get from the two tests, lead us to think that the factor 'similarity of psychological needs' is working independently in the pairing of friends in both the groups. The factor might be insignificant in its similar capacity (Table 10), and whatever be the place in pairing phenomenon, they are working independently. It is very likely that different needs must have found expression in different intensity, and there is an extra inclusion of need for 'negativism' in SCT responses. Thus the results might be confirmed by further researches. However, as the similarity of 'psychological needs' is not significantly (Table 10) working in both the groups of boys and girls pairs and the tendency is the same in the two groups.

(28) <u>Psychological needs (T.A.T.) and Sentiments.</u>──

Contingency Table 75 (Boys):

		Sentiments		
		A	♂	Total
	5-14	2	1	3
	15-24	4	6	10
Psychological needs (TAT)	25-34	10	7	17
	35-44	9	4	13
	45-54	4	1	5
	55-64	1	1	2
	Total	30	20	50

$$C = .25$$
$$X^2 = 3.33$$
$$n = 5$$

P lies between .70 - .50

Contingency Table 76 (Girls):

		Sentiments		
		A	<	Total
	0-9	1		1
	10-19	1	1	2
	20-29	6	4	10
Psychological needs (TAT)	30-39	13	3	16
	40-49	7	4	11
	50-59	3	2	5
	60-69	3	2	5
	Total	34	16	50

$$C = .21$$
$$X^2 = 2.31$$
$$n = 6$$
$$P = .90$$

The chi-square equals to 3.33 with P lying between .70 and .50 in the boys' group, is insignificant to indicate the real association between the two factors 'similarity of sentiments' and the 'similarity of psychological needs' (T.A.T.). Therefore, the two variables are working independently in the pairing of boys. Similarly, in the girls' group also, the two factors are independent variables, as the X^2 value is 2.31 with P = .90. Hence, the two variables here show a similar trend of independence in the two groups of boys and girls.

(29) <u>Psychological needs (T.A.T.) and Depressive state.</u>--

Contingency Table 77 (Boys):

Depressive state

		A	d	Total
	5-14		3	3
	15-24	4	6	10
	25-34	8	8	16
Psychological needs (TAT)	35-44	4	9	13
	45-54	4	2	6
	55-64	1	1	2
	Total	21	29	50

$$C = .92$$
$$X^2 = 275.52$$
$$n = 6$$
P lies beyond the table

Contingency Table 78 (Girls):

Depressive state

		A	d	Total
	0-9		1	1
	10-19		2	2
	20-29	4	6	10
Psychological needs (TAT)	30-39	6	10	16
	40-49	3	7	10
	50-59		6	6
	60-69		5	5
	Total	13	37	50

$$C = .35$$
$$X^2 = 6.99$$
$$n = 6$$
P lies between .50 - .30

The 'psychological needs (T.A.T.)' and 'depressive state' are dependent variables in boys group as the chi-square is 275.52 with P beyond the table. But the trend is not the same among girls pairs. The similarity of 'depressive state' and the similarity of 'psychological needs' (T.A.T.) are independent variables in the pairing phenomenon of girls as the P lies between .50 and .30. The trend here we find in the two groups is different.

(30) Psychological needs (T.A.T.) and Anxiety State.—
Contingency Table 79 (Boys):

Anxiety

		A	α	Total
	5-14	1	2	3
	15-24	6	4	10
	25-34	8	9	17
Psychological needs (TAT)	35-44	8	4	12
	45-54	1	5	6
	55-64	1	1	2
	Total	25	25	50

$$C = .30$$

$$x^2 = 4.95$$

$$n = 5$$

$$P = .50 - .30$$

Contingency Table No. 80 (Girls):

Anxiety

		A	α	Total
	0-9	1		1
	10-19	1	1	2
	20-29	7	3	10
Psychological needs (TAT)	30-39	11	5	16
	40-49	7	3	10
	50-59	3	3	6
	60-69	3	2	5
	Total	33	17	50

$$C = .18$$
$$\chi^2 = 1.67$$
$$n = 6$$
$$P = .95$$

The chi-square, in the group of boys is equal to 4.95 and the P lies between .50 - .30 and so the two factors are working independently. In the group of girls also, the factors 'anxiety state' and 'psychological needs' (T.A.T.) seem to be working independently. Hence, we find in both the groups the two factors under consideration, are working independently.

(30) Psychological needs (S.C.T.) and Sentiments.–

Contingency Table 21 (Boys):

Sentiments

		A	α	Total
	15-24		1	1
	25-34	6	1	7
	35-44	6	6	12
Psychological needs (SCT)	45-54	12	3	15
	55-64	4	8	12
	65-74	1		1
	75-84	1	1	2
	Total	30	20	50

$$C = .42$$
$$x^2 = 10.71$$
$$n = 6$$

P lies between .10 – .05

Contingency Table 32 (Girls):

Sentiments

		A	α	Total
	10-19		1	1
	20-29	4	2	6
	30-39	8	2	10
Psychological needs (SCT)	40-49	9	7	16
	50-59	9	4	13
	60-69	3		3
	70-79	1		1
	Total	34	16	50

$$C = .32$$
$$x^2 = 5.70$$
$$n = 6$$
$$P = .50$$

In the boys' group the factors 'sentiments' and the 'psychological needs' (G.C.T.) are tending to be associated as the x^2 value is 10.71 with P lying between .10 and .05 level of significance. The factors are tending to be dependent variables. But in the girls' groups the two factors are working independently as the P = .50.

(32) Psychological needs (SCT) and Depressive state.--
Contingency Table 33 (Boys):

		Depressive state		
		A	d	Total
	15-24	1		1
	25-34	2	5	7
	35-44	7	5	12
Psychological needs (SCT)	45-54	7	8	15
	55-64	3	9	12
	65-74		1	1
	75-84	1	1	2
	Total	21	29	50

$$C \quad = \quad .32$$
$$x^2 \quad = \quad 5.71$$
$$n \quad = \quad 6$$
$$P \quad = \quad .50$$

Contingency Table 84 (Girls):

	Depressive state		
	A	d	Total
	10-19		1	1
	20-29	1	5	6
	30-39	2	8	10
Psychological needs (SCT)	40-49	3	13	16
	50-59	5	8	13
	60-69	2	1	3
	70-79		1	1
	Total	13	37	50

$$C = .31$$

$$X^2 = 5.32$$

$$n = 6$$

$$P = .50$$

The 'psychological needs' from S.C.T. responses are independently working in relation to the factor 'depression' in the boys' as well as in the girls' group. The X^2 value for boys is 5.71 and P lies at .50 and X^2 value in girls group is 5.32 and the P = .50 and, therefore, the trend of being independent variables in the two groups of boys and girls, tend to be the same.

(33) Psychological needs (SCT) and Anxiety.--

Contingency Table 85 (Boys):

		Anxiety		
		A	α	Total
	15-24	1		1
	25-34	4	3	7
	35-44	4	8	12
Psychological needs (SCT)	45-54	7	8	15
	55-64	6	6	12
	65-74	1		1
	75-84	2		2
	Total	25	25	50

$$C = .32$$
$$X^2 = 5.71$$
$$n = 6$$
$$P = .50$$

Contingency Table 86 (Girls):

		Anxiety		
		A	α	Total
	10-19		1	1
	20-29	3	3	6
	30-39	5	5	10
Psychological needs (SCT)	40-49	11	5	16
	50-59	10	3	13
	60-69	3		3
	70-79		1	1
	Total	32	18	50

$$C = .37$$
$$X^2 = 7.93$$
$$n = 6$$
$$P = .30$$

The chi-square values in the two groups of boys and girls are 5.71 and 7.92 respectively and are insignificant as the P equals to .50 and .30. Therefore, the two factors 'similarity of anxiety state' and 'similarity of psychological needs' (from S.C.T. responsory) are working independently. In the group of boys both the factors are insignificant but among girls similarity of anxiety state plays a significant role, with insignificant difference with that in boys (Table 10). Thus we find that the trend is similar in the two groups of boys and girls so far as independency of the two factors is concerned.

(34) Sentiments and Depressive state.--

The variables have been divided into A and α and B and β sub-factors and γ_t i.e., 'co-efficient of association' have been calculated instead of 'coefficient of contingency'. The purpose is the same, i.e., to find out whether the variables are independent or associated.

Association Table 87 (Boys):

Depressive state

		B	β	Total
	A	15	15	30
Sentiments	α	6	14	20
	Total	21	29	50

$$\gamma_t = \quad .33$$

Association Table 88 (Girls):

Depressive state

		B	β	Total
	A	10	24	34
Sentiments	⍺	3	13	16
	Total	13	37	50

$$\gamma_t = .23$$

The association between the 'depressive state' and 'sentiments' is positive as γ equals to .33 in the group of boys. Therefore, the two variables are working together, though insignificantly (Table 10). The association of the two factors, in the group of girls also, is positive as $\gamma_t = .23$. Therefore, among girls pairs also, these factors are working together.

(35) Sentiments and Anxiety.--

Association Table 89 (Boys):

Anxiety

		B	β	Total
	A	15	15	30
Sentiments	⍺	10	10	20
	Total	25	25	50

$$\gamma_t = 0$$

Association Table 90 (Girls):

Anxiety

		B	β	Total
	A	23	11	34
Sentiments	⍺	10	6	16
	Total	33	17	50

$$\gamma_t = .09$$

$\eta = 0$ between 'similarity of anxiety state' and 'similarity of sentiments', among the pairs of boys, leading us to infer that the two factors are independent of each other. But in the group of girls the two factors are working in association to each other. Therefore, we find that these factors are working differently in the two groups of boys and girls so far as the independence is concerned.

(36) <u>Depressive state and Anxiety state</u>.--

Association Table No. 91 (Boys):

Depressive state

Anxiety		B	β	Total
	A	8	13	21
	α	17	12	29
	Total	25	25	50

$$\eta = \quad - .31$$

Association Table 92 (Girls½):

Depressive state

Anxiety		B	β	Total
	A	11	2	13
	α	22	15	37
	Total	33	17	50

$$\eta = \quad .49$$

In this combination also, we find that the factors 'similarity of anxiety state' and 'similarity of depressive state' are completely dissociated among the boys' pairs, as $\eta = -.31$. But reverse is the case, among girls pairs, $\eta = .49$ showing a complete association of the two variables. The two factors are working in dependence to each other in the pairing phenomenon of girls.

To summarise there are few overlappings in the sociological and psychological factors among boys pairs as well as among girls pairs.

In sociological factors, there is a tendency of 'culture and living habits' and 'physical appearance and other contributing factors' to be associated only among boys pairs and among girls an overlapping is found in 'socio-economic status' and 'physical appearance and other contributing factors'.

In 'psychological factors', there are a few combinations of two factors working in association with each other in both the groups of boys and girls. In boys group the combinations are:-

(1) Likes and Psychological needs (TAT).

(2) Dislikes and Psychological needs (SCT).

(3) Dislikes and Sentiments.

(4) Psychological needs and Depression.

(5) Psychological needs and Sentiments.

(6) Sentiments and Depression.

Among girls' pairs, we find following combinations of factors working together:-

(1) Likes and Dislikes.

(2) Likes and Psychological needs (T.A.T.)

(3) Likes and Psychological needs (S.C.T.)

(4) Dislikes and Anxiety.

(5) Mental ability and Psychological needs (S.C.T).

(6) Mental ability and Sentiments.

(7) Extraversion-introversion and Depressive state.

(8) Sentiments and Depression.

(9) Sentiments and Anxiety.

(10) Depression and Anxiety.

The 'co-efficient of contingency' for the factors -- Socio-logical as well as psychological do not give any conclusive result, and hence factorial analysis has been attempted. Such an analysis for the sociological factors has not been done because of the fact that the 'CS' for them are not significant except in the case of one or two in the whole matrix. The 'Cs' for psychological factors are significant except in a few cases. Therefore, factorial analysis has been attempted for the psychological factors only.

The loadings for the factors in the group of boys are as follows:-

FACTORS	LOADINGS				
	I	II	III	IV	V
Likes	.68	-.09	.18	-.25	-.04
Dislikes	.95	-.39	-.41	.23	.06
Mental ability	.30	-.09	.10	-.08	.29
Extraversion-introversion	.56	-.03	.26	-.19	-.44
Psychological needs (TAT)	.86	.56	.30	.30	-.26
Psychological needs (SCT)	.80	-.15	.16	-.01	.12
Sentiments	.64	-.18	-.60	-.03	-.18
Depressive State	.57	.74	-.29	-.04	-.00
Anxiety	.27	-.36	.36	.54	-.03

The first factor has heavy positive loadings (as should be expected from the very nature of the technique) on all the variables except on 'mental ability' and 'anxiety'. Thus it indicates towards the existence of a general factor.

The second factor is bipolar with 'Depressive state' as the positive pole and 'Dislikes and Anxiety' at the negative pole, meaning thereby that the factors are spread over the bipolar axis,

and 'likes', 'extroversion-introversion' and 'psychological needs (SCT)' are neutralised i.e., they do not figure on the axis. Many of the variables tend to constitute the active aspect of frustration rather than the passive acceptance.

The third factor throws into contrast measures for dislike, sentiments and depression on the one hand and anxiety, needs and extroversion-introversion on the other. This polarity would suggest that the positive end represents elements which are essentially fluid and mobile, while the negative end represents data which present a picture of comparative stability.

The error carried over to the fourth and fifth factors leads to obscurity of the factors, and, therefore, need not be interpreted.

The loadings for the factors in the group of girls are:-

		LOADINGS			
FACTORS	I	II	III	IV	V
Likes	.75	-.41	-.56	.38	.11
Dislikes	.86	-.25	-.08	.00	.58
Mental ability	.49	.57	-.19	-.04	-.19
Extraversion-introversion	.52	-.15	.02	-.34	-.06
Psychological needs (TAT)	.79	-.16	-.17	-.36	.15
Psychological needs (SCT)	.89	.37	-.34	.22	-.06
Sentiments	.27	.42	.31	-.07	.26
Depressive state	.50	-.14	.43	.15	-.18
Anxiety	.50	-.26	.30	.49	.04

In the group of girls also we find that there is an existence of a general factor with heavy positive loads on all the variables except on sentiments.

The second factor is bipolar with heavy positive loadings on 'mental ability and sentiments' grouping together against equally heavy negative loadings on the factor 'likes' meaning thereby that the factors of more permanent nature group together against the changing ones, viz., 'likes', 'dislikes' and 'anxiety'. Likes and dislikes are in a continuous process of modification.

The third factor loadings clearly indicate a grouping of 'likes' and 'psychological needs' versus 'depressive state'. The urges and impulses of their personality grouping together and the sentiments with the permanence of their nature go together with a passive acceptance of the environment.

Obscurity is again evident in the fourth and fifth factor.

On account of the fact that 'Cs' were based on 'ns' of 50 only, the Cs utilised for factorisation included a considerable amount of sampling error. By a process of factorisation this error would be carried over increasingly magnified so that the last few factors may not be psychologically very meaningful or easy to interpret. In the present interpretation, therefore, no explanatory concepts for factors beyond the third in both the groups, are necessary.

CHAPTER V

CONCLUSIONS

Conclusions and discussion.-- After the detailed study
of the pairs as given in Chapter IV we can now arrive at some
general conclusions. The analysis of the data leads us to infer
that in the present study paired friends tend to have a certain
level of similarities both in respect of the sociological and
the psychological factors, but some of these factors do not by
any means play a significant role. However, the general conclu-
sions of the present study are:-

Paired friends tend to be

(1) Similar in socio-economic status (only economic and
caste status, excluding vocational status).

(2) Similar in language.

(3) Similar in 'culture and living habits'.

(4) Affected by 'proximity'.

(5) Attracted by 'behaviour pattern'.

(6) Attracted by 'studies and intellectual qualities' (in
case of girls only).

(7) Attracted by assertive qualities (in case of girls only).

(8) Similar in trends of sentiments (in case of girls only).

(9) Similar in 'Anxiety state' (in case of girls only).

Other general conclusions are that.--

(1) The curve of similarity of factors between the paired friends among both boys and girls is deviating more or less in the same fashion. Therefore, one more inference we can safely draw is that all the assumed factors are equally working in both the groups with certain minor differences.[1]

(2) The percentage of mutual relations is higher among girls than among boys (the mean for girls - 22.8; for boys - 15.2) i.e., girls have greater tendency of pairing than the boys.

(3) Mutual relations are more guided by behaviour pattern (e.g., 'disciplined', 'honest', 'truthful', 'helping others' etc.), than by physical appearance.

(4) The sociological factors are more important than the psychological factors in the pairing phenomenon.

(5) There is likely to be some unknown factor 'X' which seems to be dominating above all the assumed factors responsible for mutual relations.

Some of the above-mentioned conclusions are in conformity with certain studies done in England and America. In the following pages a comparison of the results of these studies with the present one has been attempted, but the discussion is based only upon those studies which have investigated the factors responsible for friendships.

Taking the first conclusion that pairs tend to be similar in socio-economic status, vocational status being insignificant as a single sub-factor, we find, it is in contradiction with Vreeland and Corey's work when they point out that the parents of the friends

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1/ Graph No. 3, and Table 10.

are engaged in the same vocation. But the result is in conformity with Darley's discovery when he points out that the selective and assortative grouping is not based on 'Father's occupation'.

Similarity of 'language' and 'culture and living habits' is not evident in any of the works reviewed in Chapter II.

'Proximity' is an affecting factor according to the present study. Shukla and others[1] have also discovered that neighbourhood plays an important role. Another study by Austin and Thompson[2] who have discovered twentyone bases of selection of best friends also indicate that 'propinquity' is an important factor. Though the age range of the three studies differ, yet the results are pointing toward the same direction.

Austin and Thompson's discovery of the twentyone bases like 'cooperative', 'kind', 'eventempered' etc., are in conformity with the findings of the present work when it brings forth 'behaviour pattern' as one of the most important factors in pairing.

'Studies and intellectual qualities' is an attracting factor among girls and the similarity of I.Q. is an insignificant factor in both the groups of boys and girls. Here a contradiction arises with the results drawn by Shukla and others, who point out that part played by intelligence is highly significant among girls but not among boys. The contradiction does not arise so far as boys are concerned. As regards girls group, 'studies and intellectual qualities' are the objects of admiration, appreciation and attraction only and intelligence does not work in similar capacity. Here

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[1] The study referred was conducted on children of 11+ to 14+, while the present one is on 15+ to 18+

[2] The study deals with children's friendships- their selection and rejection bases.

the results do not agree with those of Shukla and others.

There is neither contradiction nor agreement regarding the conclusions that 'assertive qualities', 'sentiments' and 'anxiety state' are significant factors.

Again, the inference that the factors are working more or less in similar fashion in the two groups of boys and girls, agrees with the conclusions drawn by 'hukla and others. According to them boys and girls are not significantly different in sociability.

Another important point of discussion comes to the fore-front when Reilly, Commins and Stefie's work (on 'The Complementarity of Personality Needs in Friendship Choices') suggests that friends do not tend to see themselves and their friends as complementary rather than similar. At the same time there was no evidence of similarity of needs of friends. The conclusions very much agree with those of the present study. The part played by psychological needs remains undecidered in the present study and 'similarity of needs' is not 'evident' in the Reilly, Commins and Stefie's work also. The similarity of needs is significant according to S.C.T. responses only and is insignificant according to T.A.T. There is no indication of the proportion of similarity, or dissimilarity or complementarity. The 'psychological needs' are not working in 'similar' capacity according to the two tests in the present study, neither they are working in 'Complementary' capacity according to Reilly, Commins and Stefie's study. The problem of proportional constitution of the psychological needs still remains undiscovered and undecided.

Educational Implications

Out of the three sub-factors of socio-economic status the
hypothesis comes true of the similarity of economic status and
caste status, i.e., the paired friends tend to be coming from
similar economic and caste status. In other words, boys and girls
both tend to make pairs from the group of the same economic and
caste status. Secondly, similarity of language also plays an
important part, i.e., the boys and girls both tend to be attracted
towards those who belong to the same mother tongue group. All these
factors are unhealthy ones if viewed from the broad point of view
of national integration. Now a days while we are all thinking in
terms of integrating the nation into one whole unit such unhealthy
tendencies, if not discouraged, will have an adverse effect on the
work in this direction.

Moreover, the ideal of democracy in education will always
remain a dream if we do not try to remove such narrow forces operat-
ing in friendships. How can the social life of the community be
developed on democratic principles, if we often tend to be attracted
towards those who come from the same economic, caste and language
groups, thus keeping ourselves within smaller circles of community
only. A nation can never be united into one thread of affection and
good-will unless we discourage these narrow attracting factors.

The ideal of developing international outlook among students
also can not be realised, if teachers ignore these unhealthy factors
operating in the formation of friendship. The ultimate aim of educa-
tion is to educate the child so as to make him a healthy (physically,
emotionally, intellectually and spritually) member of the society
at large. The task of the teacher is to help him to educate himself

with the idea that he not only becomes a member of a family, community or state but also a member of the large human society. The teacher, therefore, should help the child to broaden his outlook and to become active in a wider social group.

Positive behaviour pattern, as the students' own impressions indicate, is another important attracting factor for the pairing phenomenon. The adolescents are attracted towards each other by the qualities like faithfulness, honesty, helpfulness, cooperation etc. The teacher, here, is to see that these human qualities and virtues are cultivated by the pupils and sufficient encouragement in this direction is provided.

Anxiety, as we find, is another characteristic of girl friends. To be attracted towards each other only because the two persons have to share their anxieties may not be quite a healthy tendency. It might lead to develop neuroses etc., if precautions are not taken at the initial stage, and therefore, the teachers have to be attentive to such friendships in the schools.

It has, however, to be noted that the formation of pairs among adolescents is bound to occur and this type of grouping is not to be discouraged in the normal course, as everyone of us needs a confidente. We cannot discuss our personal problems with everyone. We all want to share our hopes and fears, joys and sorrows, and our aims and ideals of life with some one whom we trust. But the teacher has to see that the pairs do not remain isolated from the larger group to which they belong, as may appear in certain cases (sociograms given in the appendix, pairs like R.L. Dubey and M.S. Misra and S.K. Srivastava and O.N. Garg in the sociogram for Colonelganj College). Such isolated pairs do not attract others and are confined

to their own world of the twos without any concern with others in the class. These types of pairs may have sado-masochistic types of relationships which are not at all healthy and such relationships may lead to perversions of many kinds. The individual members of such pairs are likely to be lost and feel helpless in the absence of each other. As such, we are to discourage the formation of such extremely isolated pairs.

These extreme pairs remind us of the problem of isolates. Isolates are those who neither attract any one nor do they themselves respond towards others. They live in their own world of fantasy. Although, the present work does not deal with them, such cases attracted our attention during the course of investigation and they should be studied and helped for becoming useful members of their school and college groups.

Keeping in view the above discussion, we have to find out some ways and means to discourage the unhealthy factors, to encourage the healthy ones, and to inculcate healthy friendship formation among adolescents. In order to discourage the unhealthy factors like economic, caste and language, policy should be adopted to admit students from all levels of economic, caste and language groups. Secondly, smaller associations in the institutions may be formed so as to make heterogeneous groups from the above three points. It will lead the students to come in close contact with different strata of society. Thirdly, a school or college dress must be prescribed in all the institutions, as is done in some institutions. Fourthly, pen-friendship should be encouraged so that our students understand the problems of other countries and broaden their outlook for the ultimate aim of education of universal brotherhood.

To cultivate the human qualities, associations like scouts can be organised, projects for the development of their institution may be planned and smaller groups for informal talks may be arranged.

In case of friendships based on anxiety, the reasons for these states of anxiety and depression ought to be investigated and in view of these states and discouraging extreme friendships counsel-ling and guidance centres ought to be established in each and every institution. Some such steps have already been taken on small scale. But perhaps the greatest need is in the field of personal guidance and not in vocational and educational guidance. The school psycho-logists can help a great deal in this direction.

These counselling centres can work efficiently only when the teachers and parents join hands to tackle the adolescent problems. Therefore, Teacher-parent associations should be organised on a sound basis to help the work of the guidance centres. These associa-tions should meet atleast once in a month to deal with these problems,

Apart from the above educational implications and suggestions for schools and colleges it is better to be sure as to what relation exists between the 'mutual interpersonal relations' and 'anxiety and depressive states', because unless we know about this particular phenomenon sufficiently more suggestions would be hasty ones.

Therefore, suggestions for further researches are:-

(1) The ratio of the similarity of psychological needs in proportion to the intensity of mutual relations.

(2) The mutual dynamism with reference to unconscious state.

(3) Suggestibility of personality in mutual relations.

(4) Effect of mutual pairs on the personality make-up.

(5) Interrelation of 'mutual interpersonal relations' and 'anxiety and depressive states'.

APPENDIX A

SOCIOGRAMS

SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN CASES
SELECTED FROM COLONELGUNJ INTER COLLEGE , ALLAHABAD.

Key
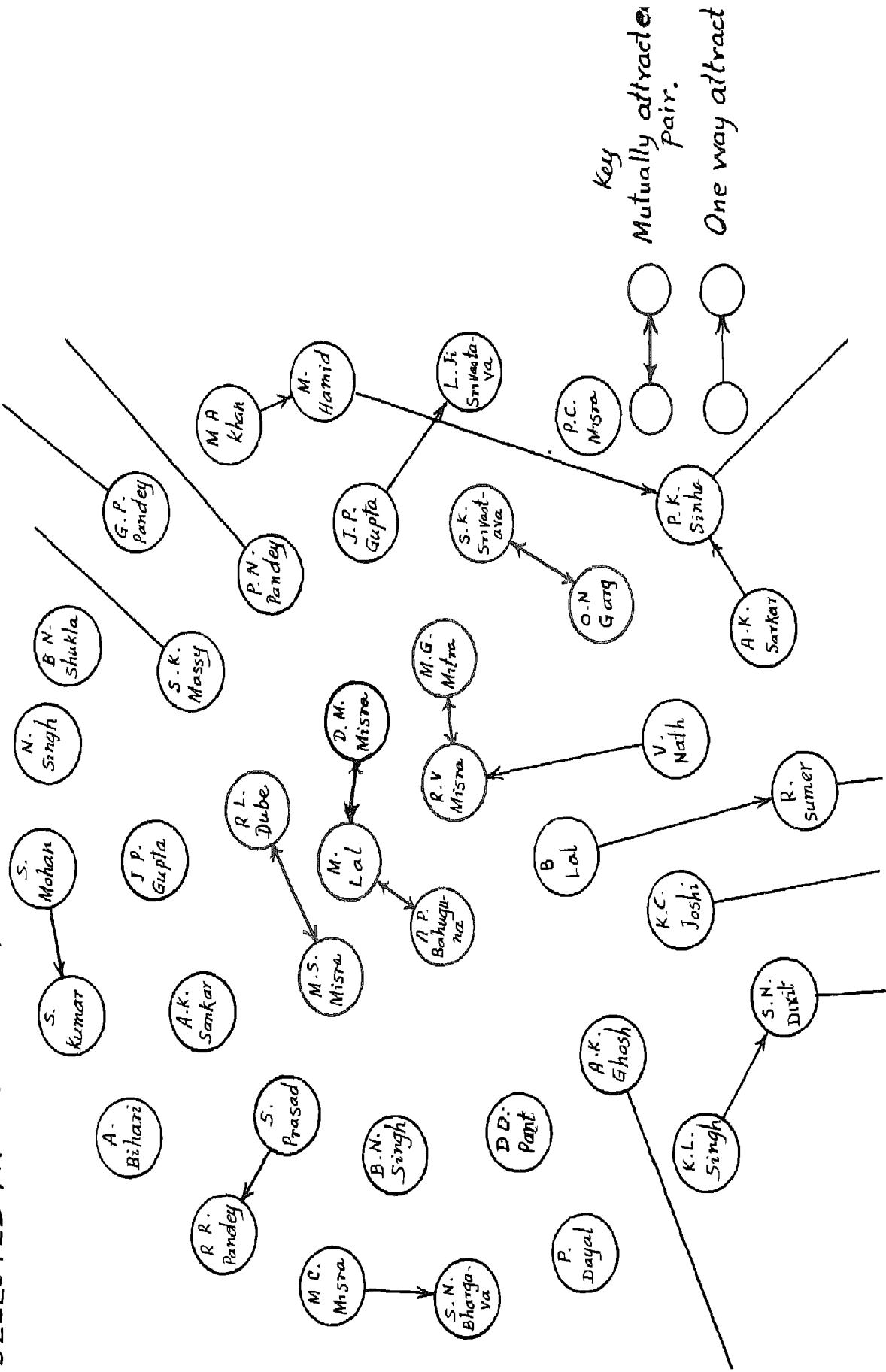
Mutually attracted
Pair.

One way attract

SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION
IN CASES SELECTED FROM D.A.V. INTER COLLEGE, ALLAHABAD.

Key
Mutually attracted pair
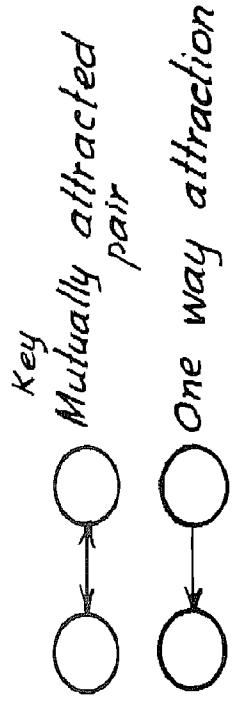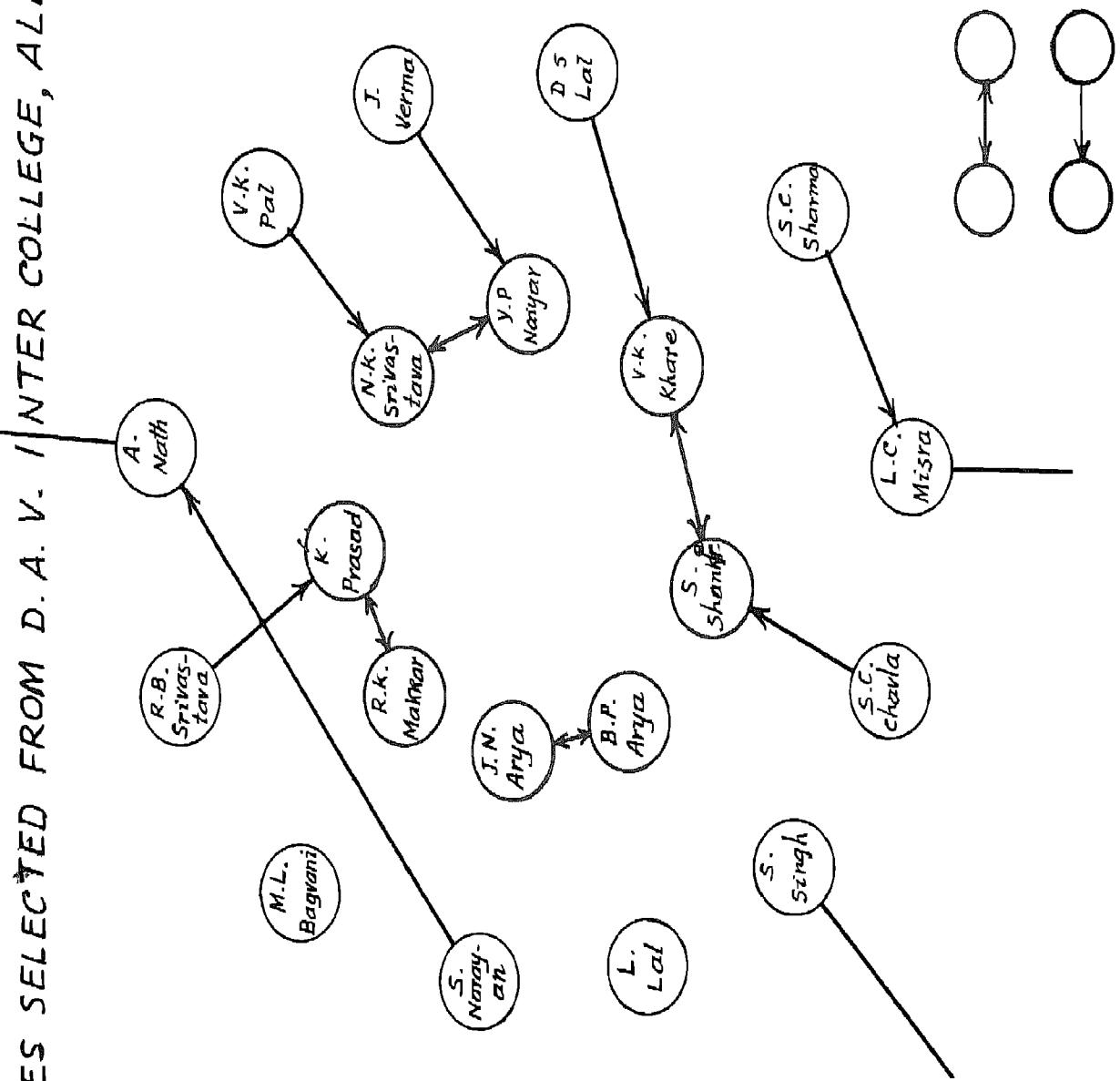
One way attraction

SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN CASES SELECTED FROM A. B. INTER COLLEGE, ALLAHABAD.

Key
Mutually attracted pair
One way attraction
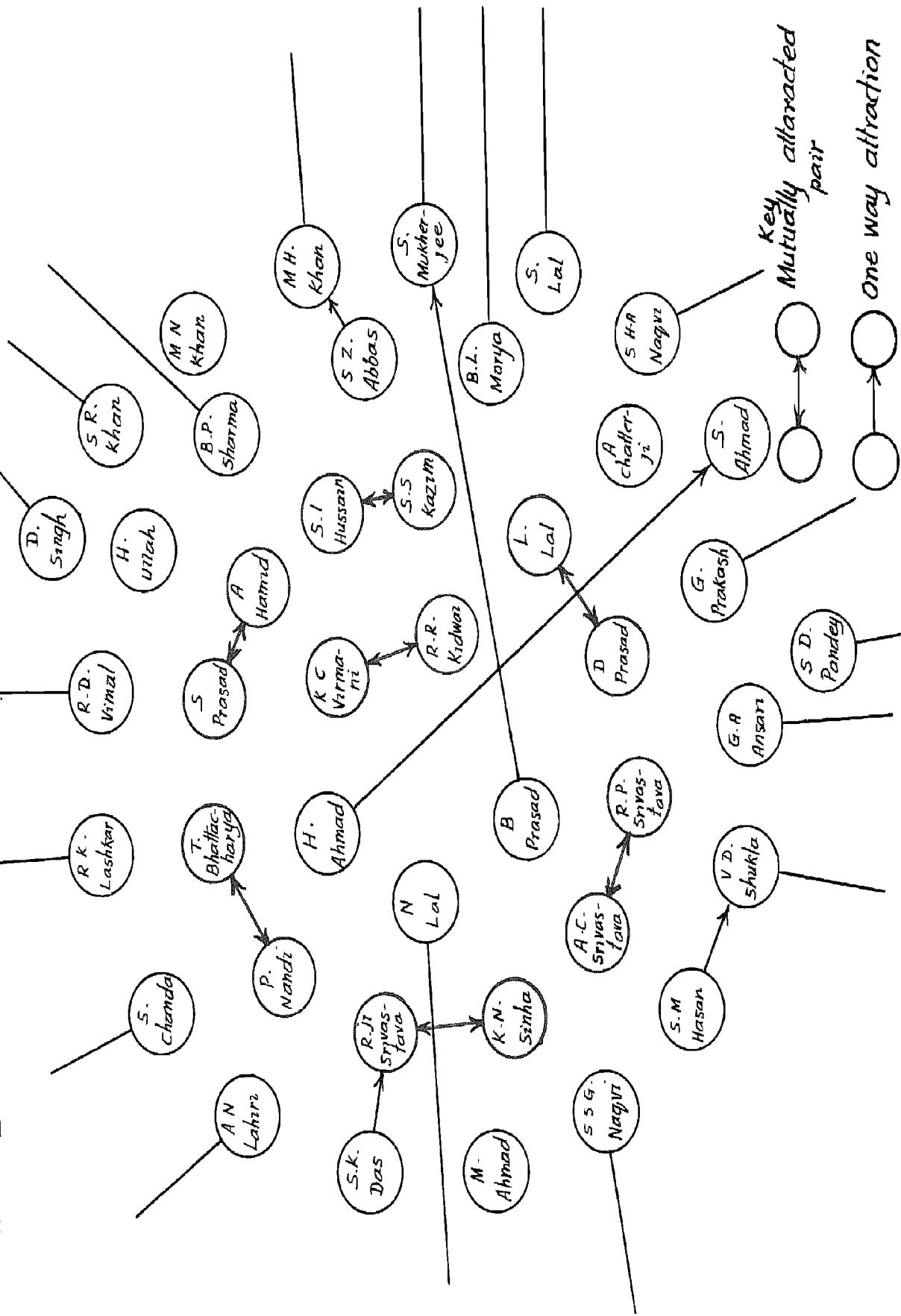
SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN
CASES SELECTED FROM C.A.V INTER COLLEGE, ALLAHABAD.
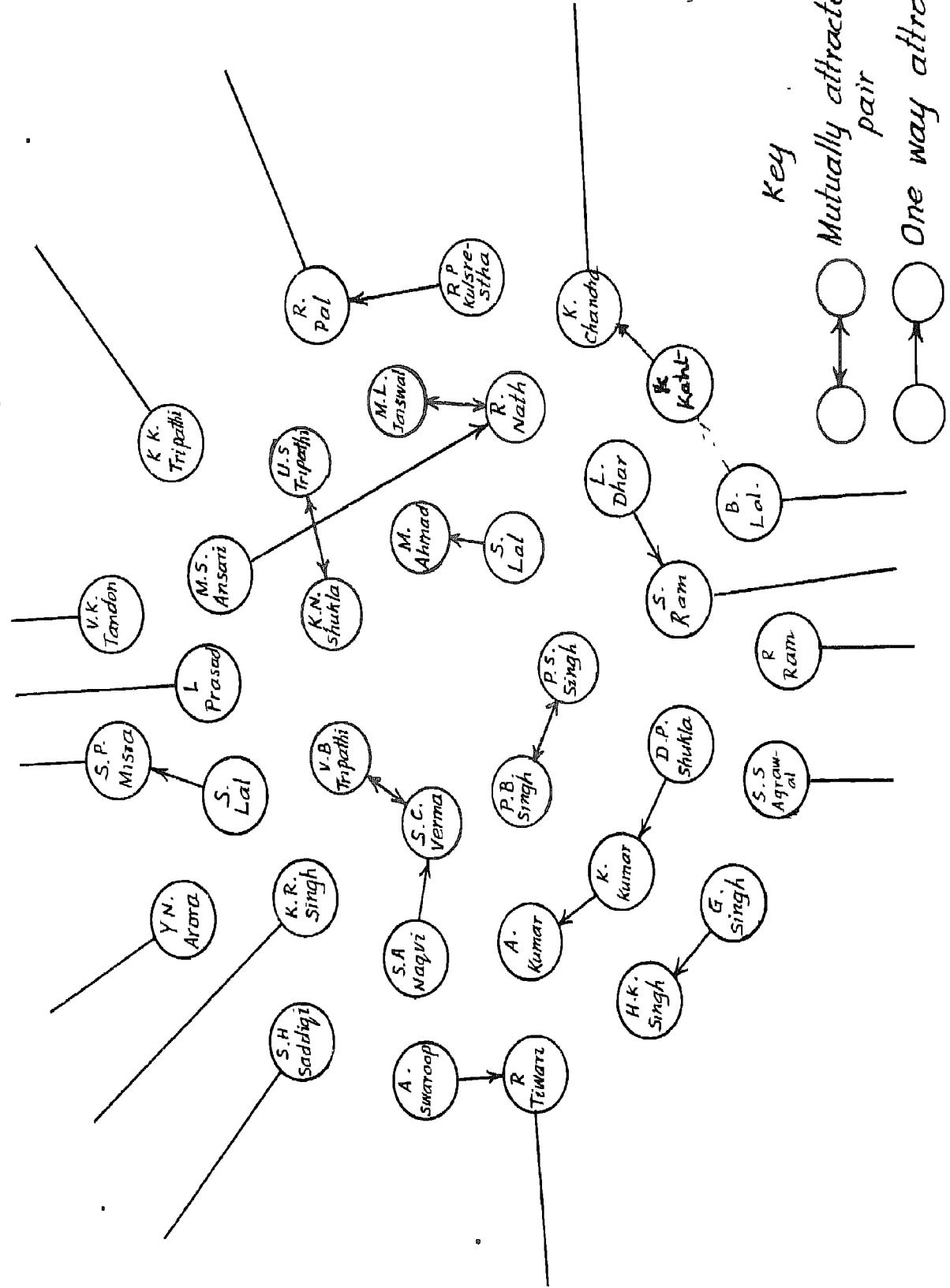
Key

Mutually attracted pair

One way attraction

SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN
CASES SELECTED FROM SARYU PARIN INTER COLLEGE, ALLAHABAD.
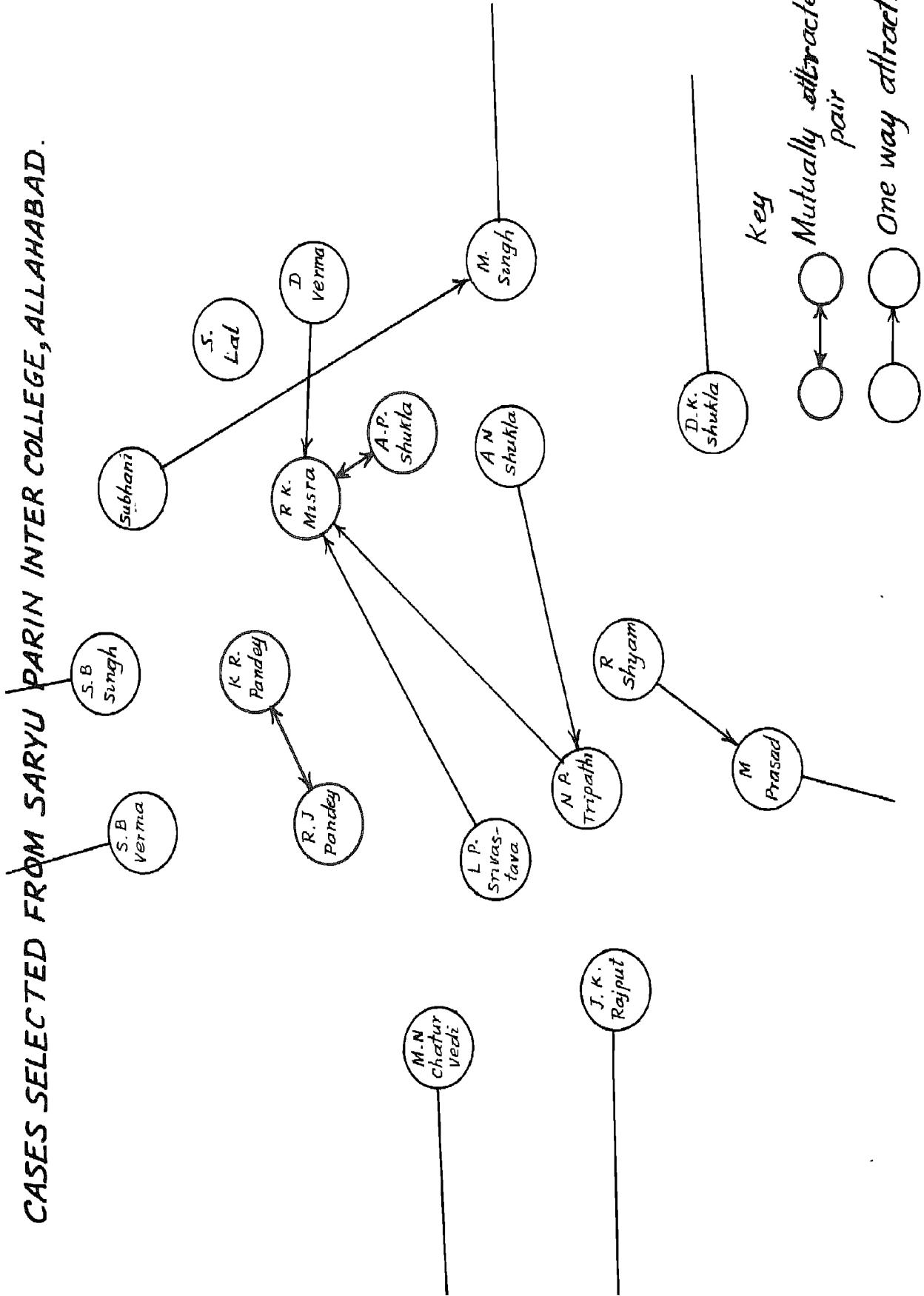
Key

Mutually attracted
pair

One way attraction

SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN CASES SELECTED FROM R.R. INTER COLLEGE, ALLAHABAD.

S. Ram

R.R. Jaswal

N. kishore

S. Lal

R.S. Vaish

A.K. Bhatt

S.S. Vansham-Payan

S.B. Vaish

N.L. Gupta

G. Singh

K.N. Shukla

M. Singh

Amar Nath

S. Lal

M. Behari

S.N. Pandey

C.L. Yadav

U. Singh

Sri Krishna

S. Lal

M.A. Japhri

C.P. Yadav

V.D. Misra

B.B. Pandey

V.P. Singh

T.N. Misra

S-RH. Shah

R.K. Ojha

S.P. Misra

G.P. Tripathi

Yoga Raj

A.K. Srivas-tava

S.N. Das

S.L. Singh

R Kumar

Y.N. Singh

M.L. Yadav

B. Prasad

Key
Mutually attracted pair.
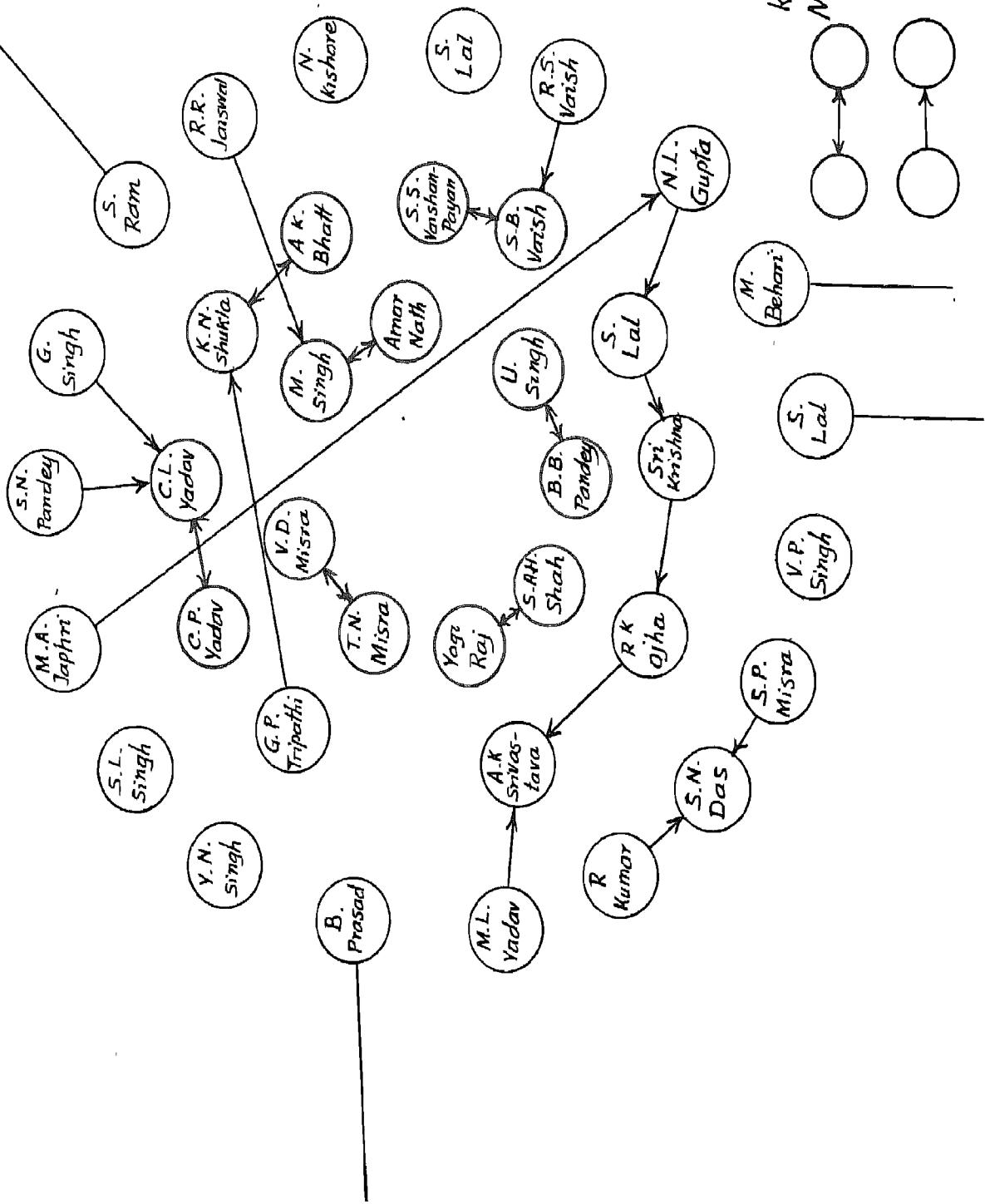
One way attraction

SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN CASES
SELECTED FROM AGRASENA INTER COLLEGE, ALLAHABAD.
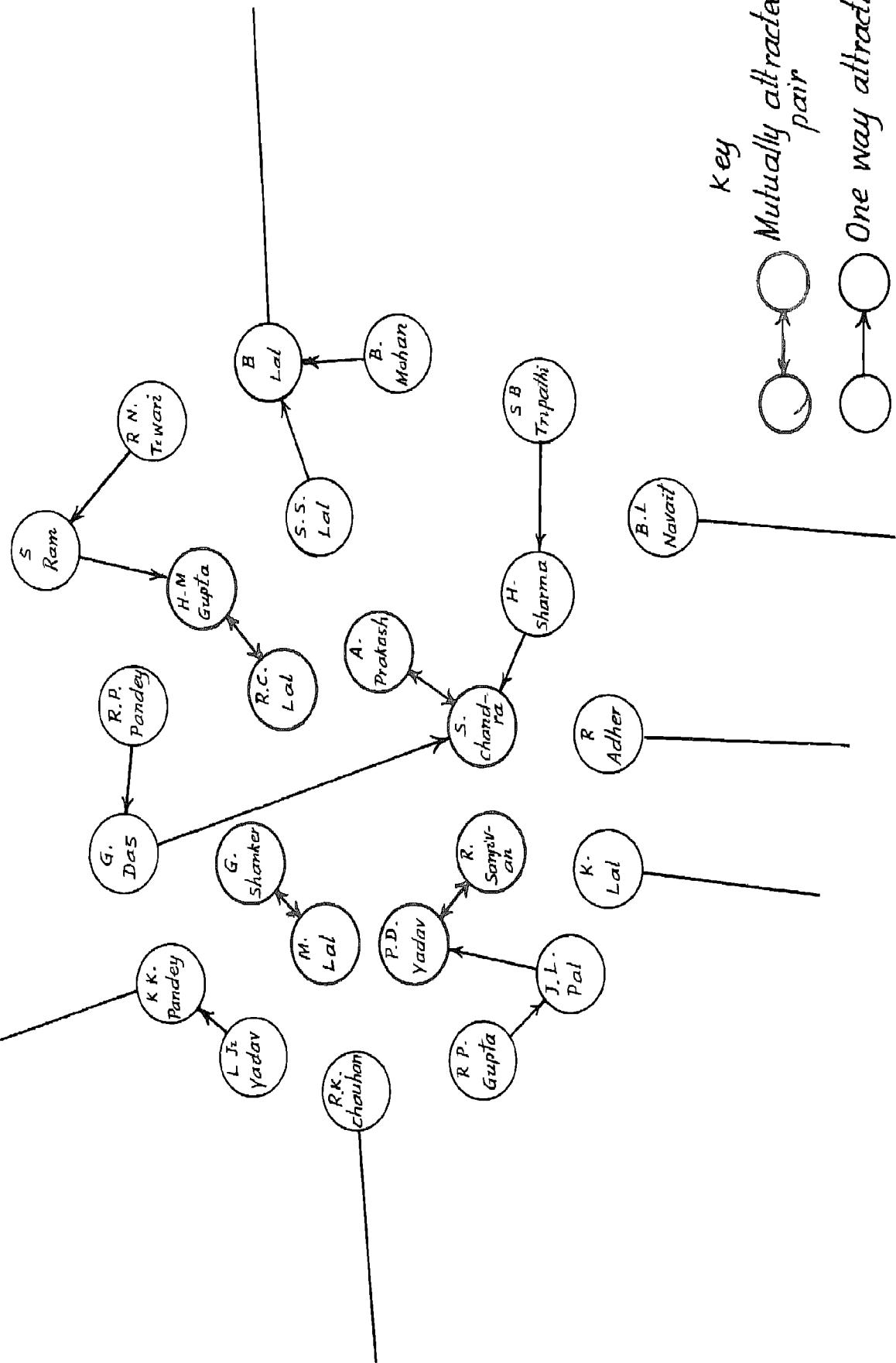
SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN CASES SELECTED FROM H.K.P. INTER COLLEGE, ALLAHABAD
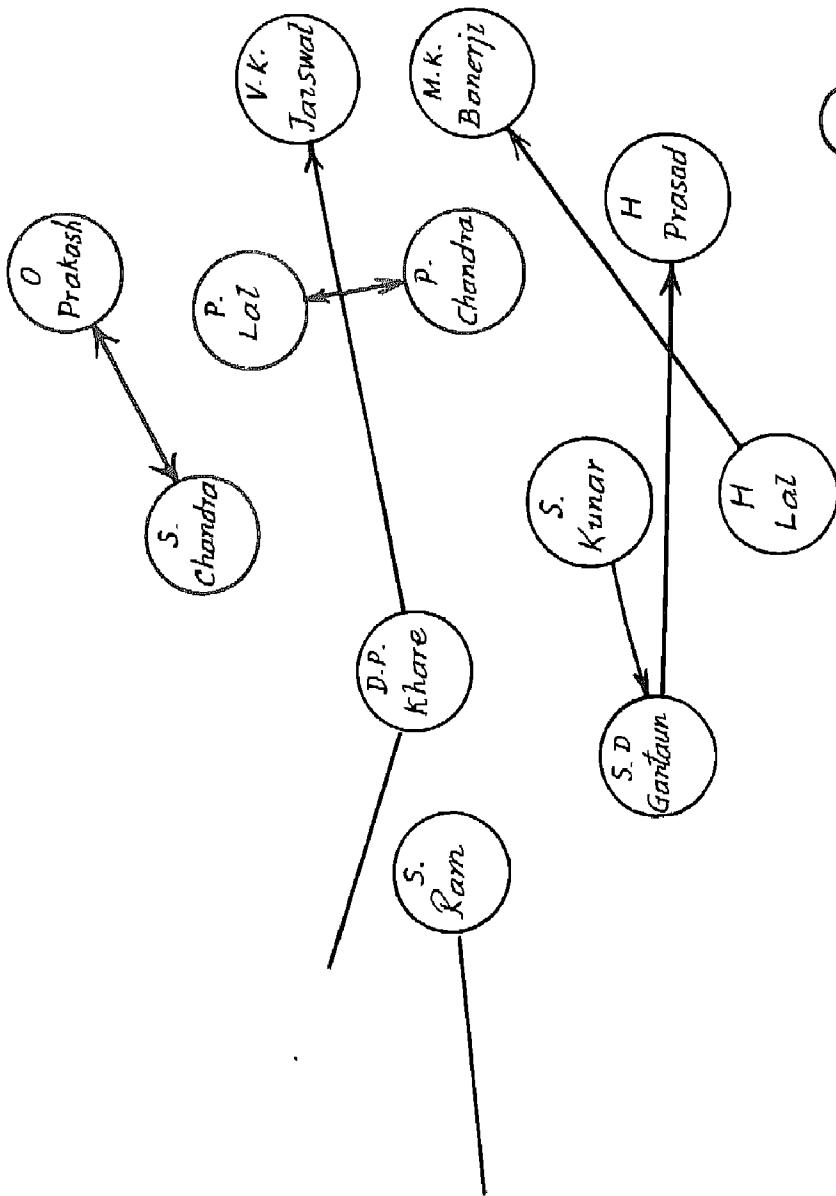
O Prakash

S. Chandra

V. K. Jaiswal

P. Lal

P. Chandra

M. K. Banerji

H Prasad

S. Kumar

H Lal

D.P. khare

S. D Gautam

S. Ram

Mutually attracted Pairs

One way attraction

SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN CASES SELECTED FROM K.P. INTER COLLEGE, ALLAHABAD.

Key
Mutually attracted pair
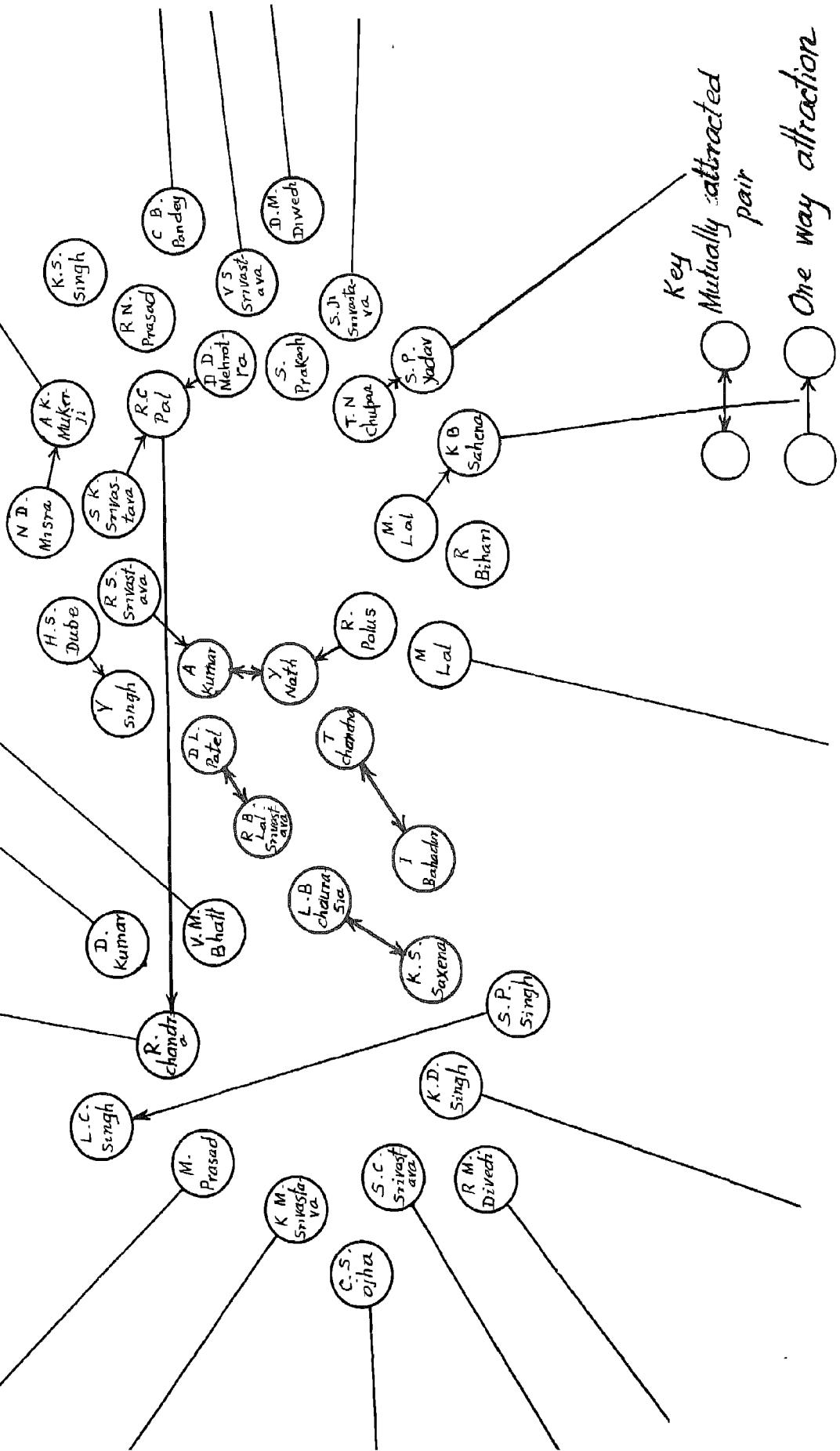
One way attraction

SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN CASES SELECTED FROM S.K.P. INTER COLLEGE, ALLAHABAD

Key

Mutually attracted pair
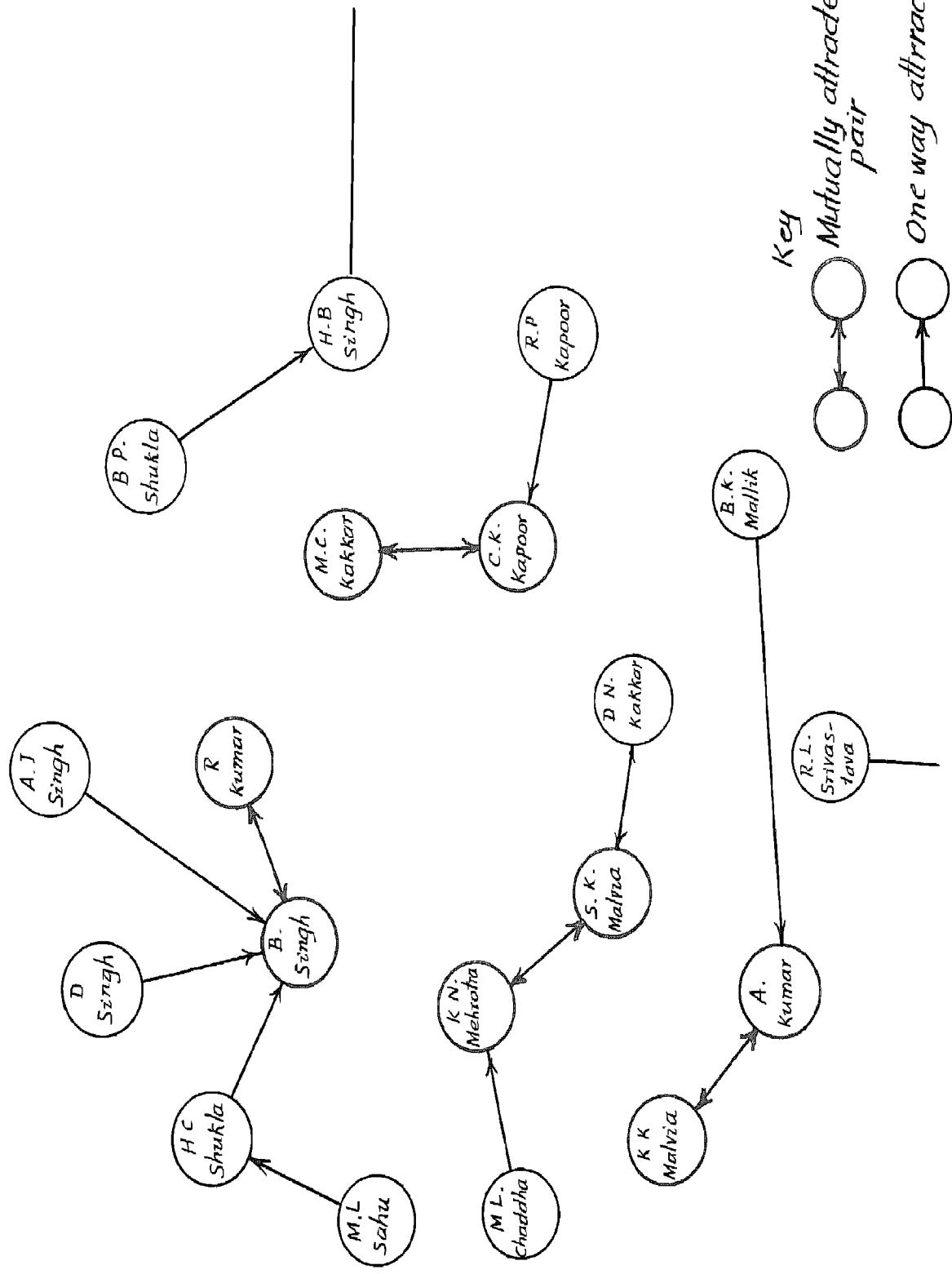
One way attraction

SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN
CASES SELECTED FROM E. C. COLLEGE, ALLAHABAD.

key

Mutually attracted pair
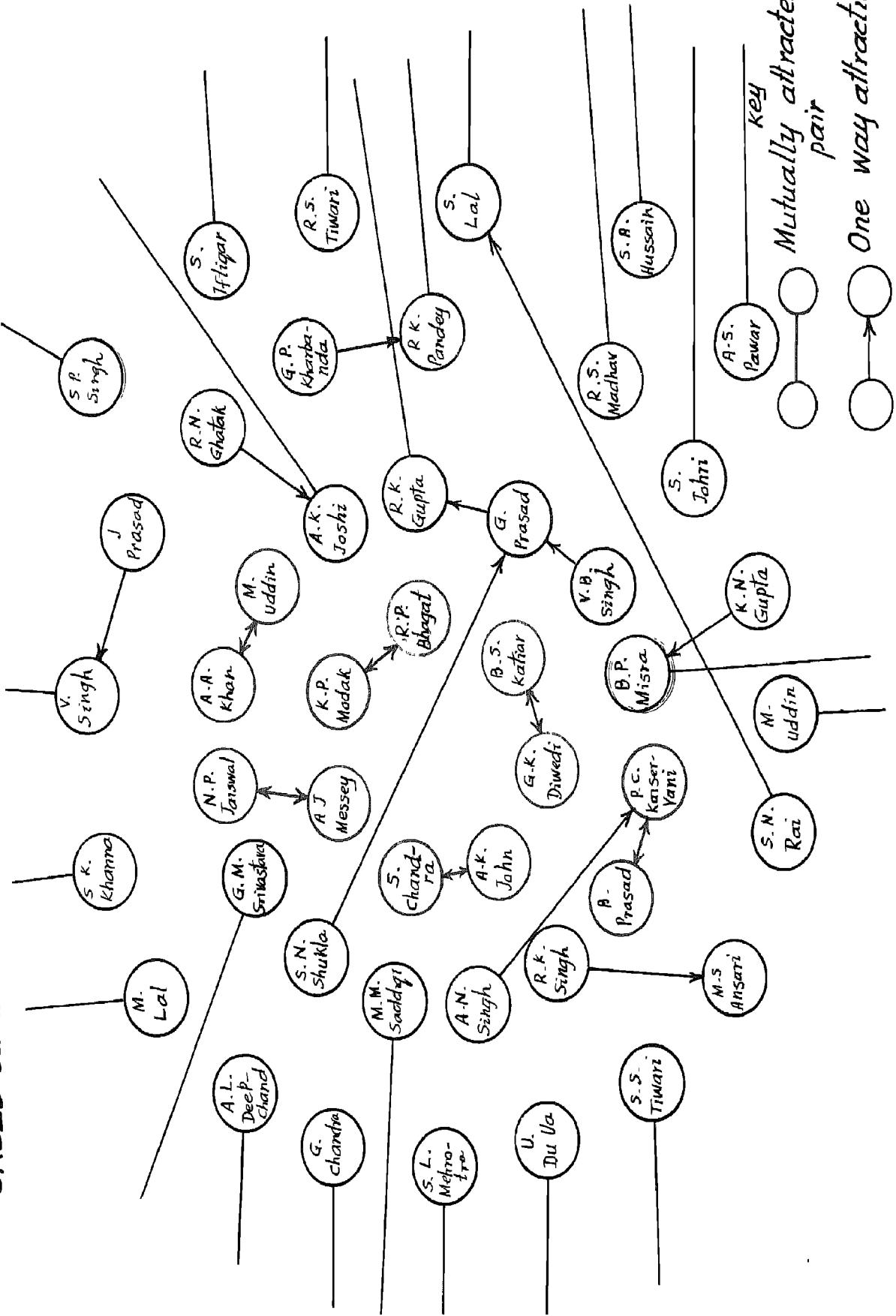
One way attraction

SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN CASES
SELECTED FROM PRAYAG MAHILA VIDYAPEETH, ALLAHABAD.

Key

Mutually attracted Pair.

One way attraction.

SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN CASES SELECTED FROM Gr. P. INTER COLLEGE, ALLAHABAD.

Key
Mutually attracted Pair.

One way attraction.

SOCIOGRAM SHOWING MUTUAL AND ONE/WAY ATTRACTIO IN CASES SELECTED FROM M. WANAMAKER INTER COLLEGE, ALLAHABAD.

C. K. Mahajan

F. Nishat

M. Hilt

J. Mukerji

M. Srivastava

P. L. Lawrence

A. Lyall

S. Parmar

M. Afroz

V. Kumari

S. David

P. Prasad

key
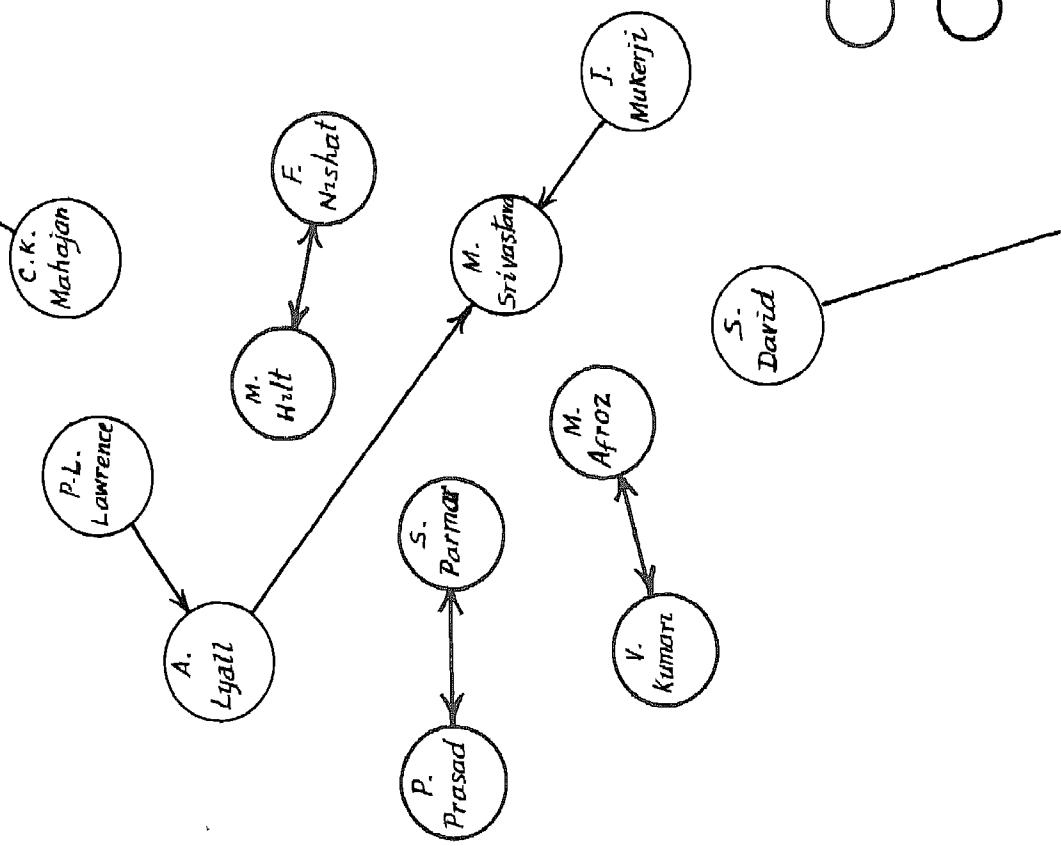
Mutually attracted pair

One way attraction

SELECTED FROM D./P. GIRLS INTER, COLLEGE, ALLAHABAD.

Key

Mutually attracted pair
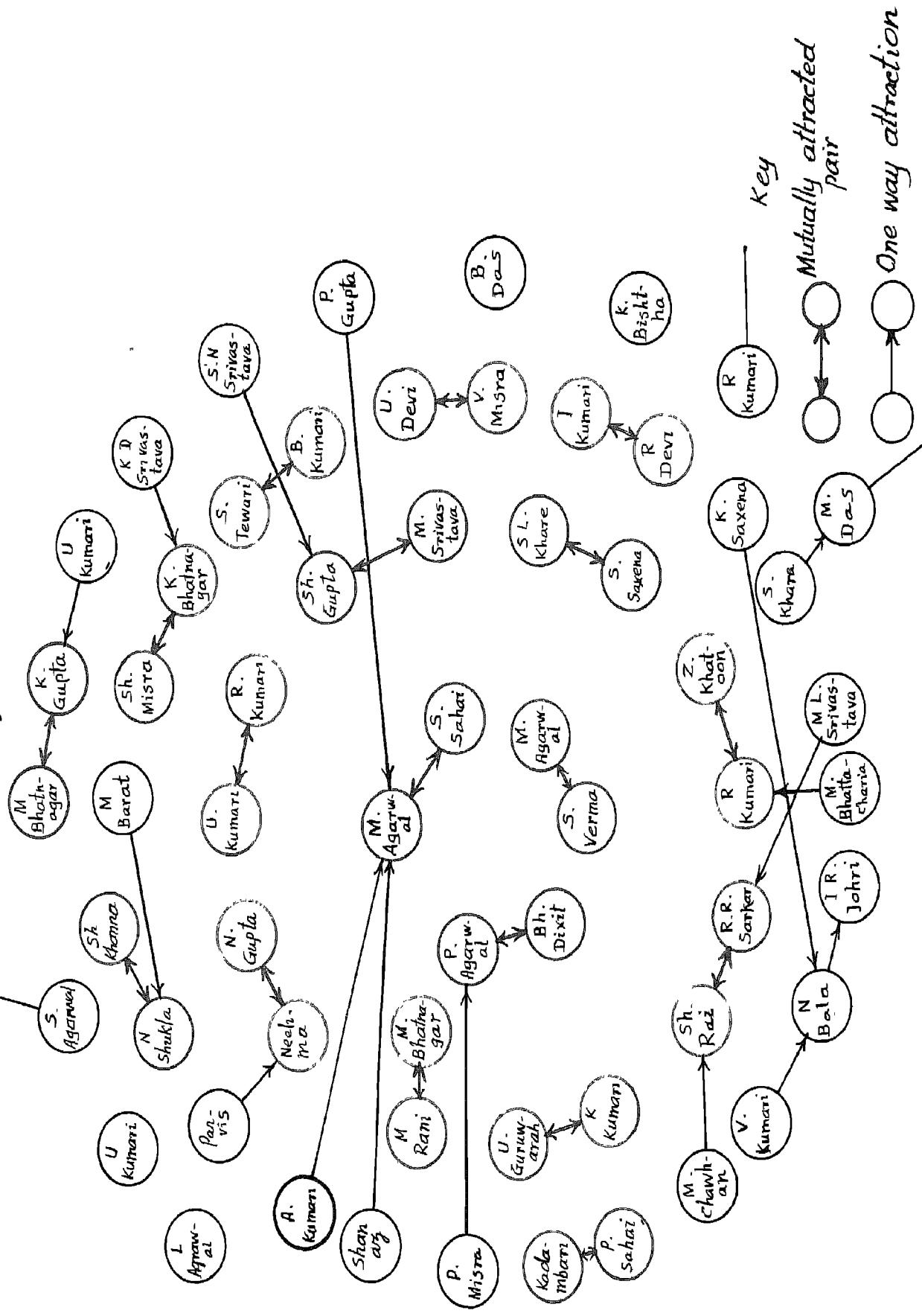
One way attraction

SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN CASES SELECTED FROM MAHILA GRAM INTER COLLEGE, ALLAHABAD.
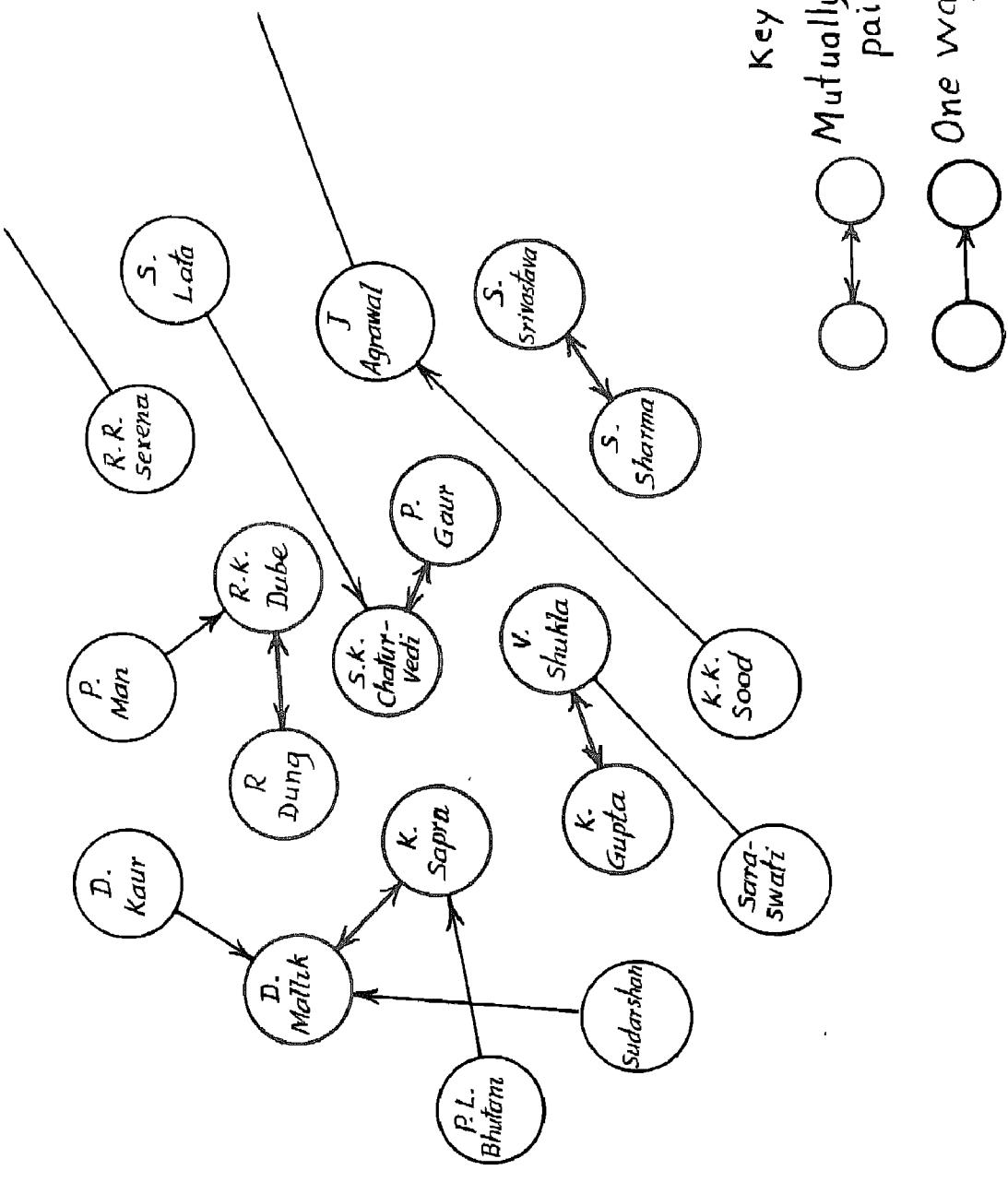
Key

Mutually attracted pair.

One way attraction.

SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN CASES
SELECTED FROM A.K.P. HIGHER SECONDARY SCHOOL, ALLAHABAD.

Key
Mutually attracted pair.
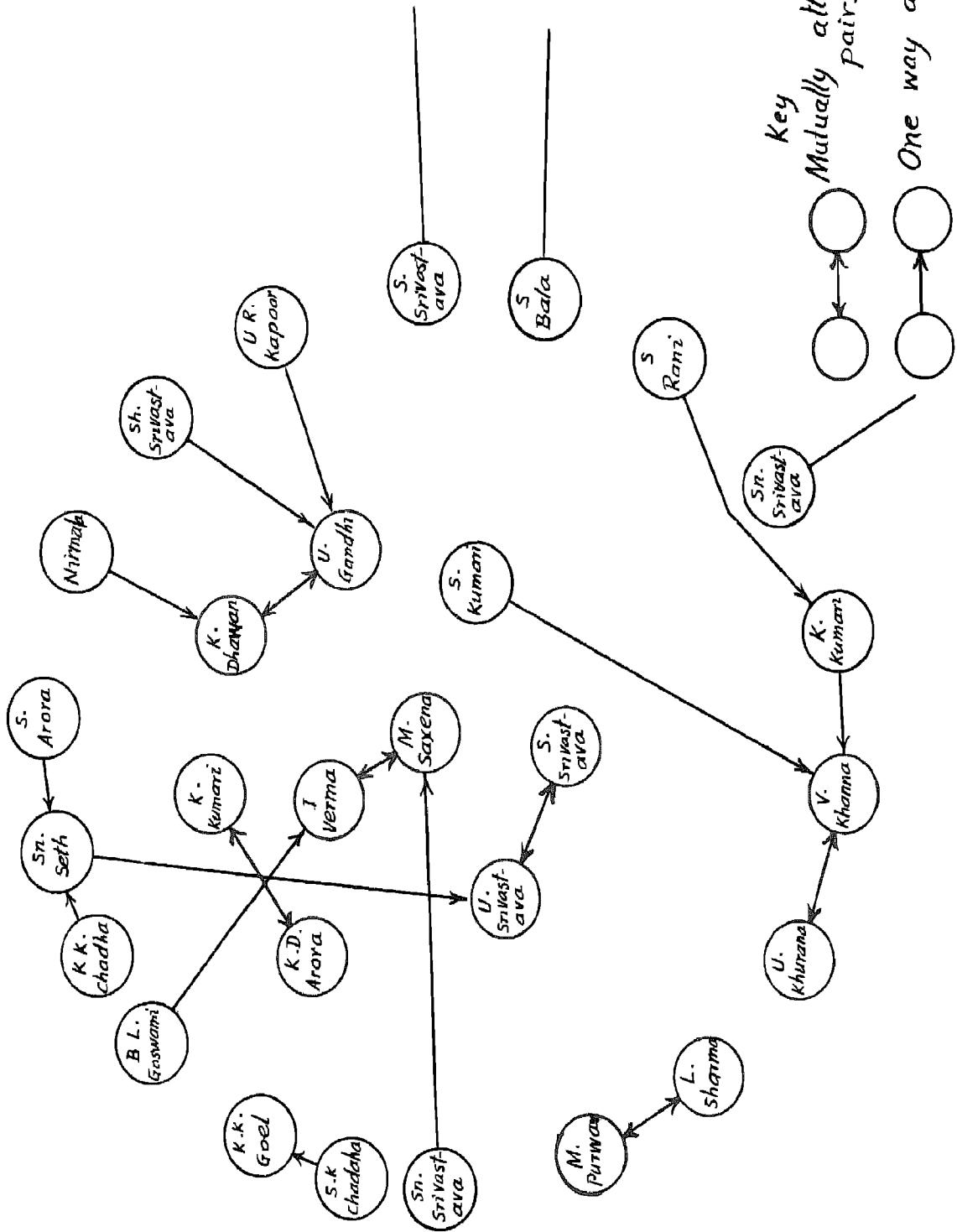
One way attraction.

SOCIOGRAM SHOWING MUTUAL AND ONE WAY ATTRACTION IN
CASES SELECTED FROM H.M.V./INTER COLLEGE, ALLAHABAD

KEY

Mutually attracted
pairs

One way attraction
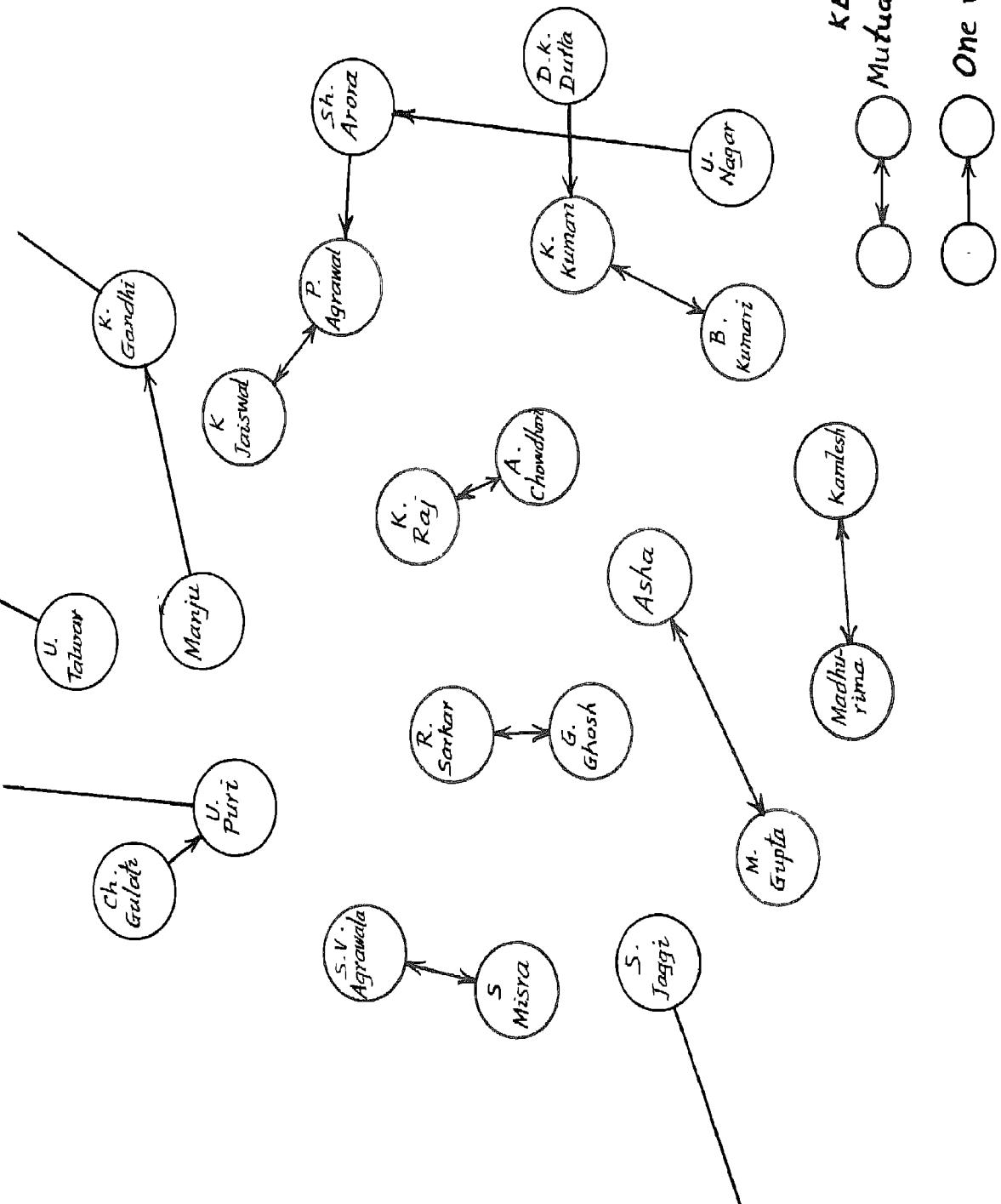
APPENDIX B

QUESTIONNAIRE

शिक्षा-विभाग -- इलाहाबाद यूनिवर्सिटी

निम्नलिखित प्रश्न एक शिक्षा संबंधी अनुसंधान के लिए पूछे जा रहे हैं । अतः सभी छात्र-छात्राओं से प्रार्थना है कि वे प्रत्येक प्रश्न का उत्तर ठीक ठीक दें जिससे इस अनुसंधान का फल ठीक मिल सके, तथा शिक्षा क्षेत्र में किसी वांछनीय परिवर्तन लाने में सहायक हो सके । उत्तर गोपनीय रहेंगे । किसी भी प्रश्न पर अत्यधिक समय नष्ट किये बिना स्वाभाविक उत्तर दें ।

कुछ प्रश्नों के उत्तर हां या नहीं में है उसमें अनुपयुक्त शब्द को काट दें । कुछ प्रश्नों में चुनाव करना है, अपने चुनाव पर केवल (✓) का चिन्ह लावें । धन्यवाद ।

नाम--विवाहित

अविवाहित

जाति------------------------ स्त्री । पुरुष ------------जन्मतिथि

मातृभाषा------------------ कक्षा------------------------

स्कूल व कालेज--

पिछली कक्षा का परीक्षाफल ------------------------------

पिता व अभिभावक का नाम और पेशा ------------------------

पिता या अभिभावक की आय ----------------------------------

स्थानीय पता --

घर के सदस्यों की संख्या-------- स्त्री ------- पुरुष ----- लड़के --------

लड़कियां --------

घर के कमाने वाले सदस्यों की संख्या ------------------------

घर के पढ़ने वाले सदस्यों की संख्या ------------------------

वे किन कक्षाओं में पढ़ते हैं ------------------------------

भाग अ

निम्नलिखित प्रश्नों के उत्तर में तीन नाम अपनी पसन्द के क्रम से लिखिये :-

(१) यदि आपको किसी पाठ्य-पुस्तक (Text Book) की आवश्यकता हो तो

(कृ0प0उ0)

आप किस मित्र से मांगना पसन्द करेंगे ?

  (अ) ------------------------ (ब) ---------------- (स) ---------------

(२) आपको स्कूल में दिया हुआ घर का काम (Home Task) करना है, आप किस मित्र के साथ अध्ययन करना चाहेंगे ?

  (अ) ------------------- (ब) ---------------- (स) ---------------

(३) आप स्कूल व कालेज के किसी उत्सव में जा रहे हैं, किस मित्र के साथ जाना चाहेंगे ?

  (अ) ------------------- (ब) ---------------- (स) ---------------

(४) शाम के घूमने के लिए आप किस मित्र के साथ जाना चाहेंगे ?

  (अ) ------------------- (ब) ---------------- (स) ---------------

(५) आपको एक Games Prefect का चुनाव करना है, इसके लिए कौन सी लड़की व लड़का उपयुक्त है ?

  (अ) ------------------- (ब) ---------------- (स) ---------------

(६) कौन सी लड़की या लड़का सबसे अधिक निष्कपट (Sincere) है ?

  (अ) ------------------- (ब) ---------------- (स) ---------------

(७) आपके विचार में कौन सी लड़की या लड़का सबसे अधिक मददगार (helpful) है ?

  (अ) ------------------- (ब) ---------------- (स) ---------------

(८) कौन सी लड़की या लड़का सबसे अधिक सर्वप्रिय (popular) है ?

  (अ) ------------------- (ब) ---------------- (स) ---------------

(९) कौन सी लड़की या लड़का सबसे अधिक क्रियाशील (Active) है ?

  (अ) ------------------- (ब) ---------------- (स) ---------------

(१०) सबसे अधिक अध्ययनशील (Studious) कौन सी लड़की या लड़का है ?

  (अ) ------------------- (ब) ---------------- (स) ---------------

(११) आप अपने मन की बात (गोपनीय) किसी से कहना चाहते हैं, किस लड़के या लड़की से कहना चाहेंगे ?

  (अ) ------------------- (ब) ---------------- (स) ---------------

(१२) उपर्युक्त लिस्ट (List) में आप सबसे अधिक पसन्द किसे करते हैं ?

(अ) ------------------- (ब) ------------------- (स) -------------------

(१३) आपका सबसे घनिष्ट मित्र कौन है ?

(अ) ------------------- (ब) ------------------- (स) -------------------

(१४) आपकी उससे मित्रता होने का क्या कारण है ?

भाग 'ब'

(१) आप अपने मित्र के साथ किस भाषा में बात करते हैं ? (प्रादेशिक भाषा का भी उल्लेख करें)

----

(२) आपके सबसे घनिष्ट मित्र बहुत परिश्रमी हैं

परिश्रमी हैं

परिश्रमी नहीं हैं

(३) आपके सबसे घनिष्ट मित्र बहुत लापरवाह हैं

लापरवाह हैं

लापरवाह नहीं हैं

(४) आपके घनिष्ट मित्र अपना व्यक्तिगत कार्य स्वयं करते हैं । हां । नहीं

(५) आपके मित्र अपना कमरा अपने आप साफ करते हैं । हां । नहीं

(६) आपके मित्र अपने माता या पिता को घर के कार्यों में सहायता देते हैं । हां । नहीं

(७) आप बहुत परिश्रमी हैं

परिश्रमी हैं

परिश्रमी नहीं हैं

(८) आप बहुत लापरवाह हैं

लापरवाह हैं

लापरवाह नहीं हैं

(६) आप अपना व्यक्तिगत कार्य अपने आप करते हैं ।   हां । नहीं

(१०) आप अपना कमरा स्वयं साफ करते हैं ।   हां । नहीं

(११) आप अपनी माता या पिता को घर के कार्यों में सहायता देते हैं ।   हां । नहीं

(१२) क्या आप कविता पढ़ना पसन्द करते हैं ?   हां । नहीं

(१३) क्या आप संगीत में रुचि लेते हैं ?   हां । नहीं

(१४) क्या आप नृत्यकला में रुचि लेते हैं ?   हां । नहीं

(१५) क्या आपको संगीत समारोह में जाना पसंद है ?   हां । नहीं

(१६) क्या आप कवि सम्मेलन में जाना पसन्द करते हैं ?   हां । नहीं

(१७) यदि आपको निम्नलिखित स्थानों में से किसी एक स्थान पर जाने की स्वतंत्रता दी जाय, आप कहां जाना पसंद करेंगे ?

   (अ) संगीत समारोह   (ब) चलचित्र   (स) खेलकूद समारोह

(१८) आप किस प्रकार के चलचित्र देखना पसन्द करते हैं ?   वीर रस प्रधान

                                                  सामाजिक

                                                  रोमांचकारी

                                                  धार्मिक

(१९) क्या आपके और आपके मित्र के कुटुम्ब में भी जान पहचान है ?   हां । नहीं

(२०) क्या आप और आपकी सहेली या मित्र सहपाठी हैं ?   हां । नहीं

(२१) यदि आपकी सहेली या मित्र सहपाठी नहीं हैं तो कौन सी कक्षा में हैं ?

━━━━━━━━━━━━━━━━━━━━━━━━━━

अपने मित्र या सहेली का संक्षेप में वर्णन कीजिये ।

APPENDIX C1

INTEREST INVENTORY

शिक्षा-विभाग—प्रयाग विश्वविद्यालय
व्यक्तित्व और रुचि अनुसूची

छात्रों से—इस पुस्तिका पर कुछ न लिखें । इस तालिका की मदद से साथ दिये हुये "सूचना-पत्र" को पूरा कीजिये । इस पुस्तिका में "क्रियायें" शीर्षक के अन्तर्गत बहुत सी क्रियाओं की सूची दी गई है । इन क्रियाओं को पढ़िये और इनमें आप अपनी पसन्द से जिसे प्रथम स्थान देना चाहें उसे "सूचना-पत्र" के "क्रियायें" शीर्षक की प्रथम लाइन में लिखें । फिर दूसरी और तीसरी लाइनों में अपने द्वितीय और तृतीय चुनाव लिखें । अपने उस चुनाव को जो इस तालिका में नहीं है "सूचना-पत्र" पर लिखने में न झिझकें । उदाहरणतयः यदि आप किसी विशेष पत्रिका जो कि इस तालिका के अन्तर्गत नहीं है, में रुचि लेते हैं, उसे अवश्य अपने प्रथम चुनाव में स्थान दें । इसी प्रकार जो क्रियायें आप नापसन्द करें उन्हें भी इसी क्रम से लिखें । अपने चुनाव ध्यानपूर्वक करें ताकि आपकी रुचि की ठीक-ठीक व्याख्या कर सके, किन्तु किसी भी विषय पर सोचने में अत्यधिक समय न दें । आप यदि चाहें तीन से अधिक विषय भी लिख सकते है । धन्यवाद !

I क्रियायें (Activities) :—

(१) समाचार ज्ञात करना
(२) बच्चों की देख-भाल करना
(३) जानवरों की देख-भाल करना
(४) वाद्य यंत्रों को बजाना
(५) ड्राइंग, पेंटिंग (चित्रकला) मॉडलिंग (प्रतिमा बनाना)
(६) सिनेमा देखना
(७) नृत्य
(८) गाना
(९) नाटकों में भाग लेना
(१०) मंदिर, मस्जिद, गिरजा या गुरुद्वारा जाना
(११) हास्य रस की पत्र-पत्रिकाओं व पुस्तकों को पढ़ना
(१२) पत्रिकाओं के लिये कवितायें या कहानियां लिखना
(१३) अध्ययन करना
(१४) चीज़ें इकट्ठी करना
(१५) गप्प बाजी करना (मनोरंजक गोष्ठी)
(१६) सिलाई, कढ़ाई आदि
(१७) घर के काम, खाना पकाना आदि
(१८) मशीनों या औजारों से काम करना
(१९) लकड़ी का काम करना
(२०) ताश खेलना
(२१) दूसरे घर में खेलने वाले खेल (इनडोर) खेलना
(२२) वैज्ञानिक प्रयोग करना
(२३) विद्युत सम्बन्धी कार्य करना
(२४) नई चीजों की खोज करना
(२५) वस्तुएँ निर्माण करना
(२६) खेल कूद देखना
(२७) बाहर के खेलने वाले खेलों (आउट डोर गेम्स) में भाग लेना
(२८) मोटर गाड़ी चलाना
(२९) क्लब में जाना
(३०) म्यूजियम देखना
(३१) सोच विचार करना
(३२) पार्टियों में जाना
(३३) लेक्चर में उपस्थित होना
(३४) क्लब संचालन करना
(३५) वस्तुएं बेचना
(३६) चित्र उतारना
(३७) जादू के खेल करना
(३८) लोगों से बातें करना
(३९) बागवानी
(४०) व्यायाम करना
(४१) पशु पक्षियों का अध्ययन
(४२) पिकनिक के लिये जाना
(४३) भाषण देना
(४४) कोई अन्य क्रिया

II खेल-कूद (Games & Sports) :—

(१) बेस बाल
(२) बास्केट बाल
(३) बैडमिंटन
(४) डैकटेनिस
(५) टेनिस
(६) फुटबाल
(७) हाकी
(८) गोली (कंचा)
(९) साइकिल चलाना

(40) Film fare   (42) Screen   (44) Sports and Pastime
(41) Film India   (43) Photoplay   (45) कोई अन्य पत्रिका

VII. दैनिक समाचार पत्र पाठन (Daily News Paper Reading) के विषय में सूचना पत्र पर सूचित करें ।

VIII. भावी व्यवसाय (Future Occupation):—

(१) लेखक, कवि, लेखिका, कवियित्री आदि
(२) कालेज प्रोफेसर (अध्यापक)
(३) डाक्टर या सर्जन
(४) एकाउन्टेंट
(५) आर्मी या नेवी आफिसर
(६) केमिस्ट
(७) ड्रगिस्ट
(८) सम्पादक या सम्पादिका
(९) इन्जीनियर (Engineer)
(१०) क्लर्क
(११) दांत का डाक्टर (Dentist)
(१२) दर्जी
(१३) Air Hostess
(१४) जर्नलिस्ट
(१५) दलाल (Broker)
(१६) ठेकेदारी (Building Contractor etc.)
(१७) बढ़ईगीरी
(१८) जासूस
(१९) Electrician
(२०) कृषक
(२१) Forest Ranger
(२२) वकील या जज

(२३) सर्राफ (Jeweller)
(२४) सिनेमा डाइरेक्टर
(२५) अभिनेता या अभिनेत्री
(२६) फोटोग्राफर
(२७) रिपोर्टर (संवाददाता)
(२८) Salesman or Sales girl
(२९) सैनिक
(३०) ट्रक ड्राइवर
(३१) Wireless Operator or Radio Operator
(३२) Telephone Operator
(३३) Psychologist
(३४) School Teacher or Principal
(३५) लाइब्रेरियन
(३६) नर्स
(३७) सामाजिक कार्यकर्त्ता
(३८) टाइपिस्ट या स्टेनोग्राफर
(३९) स्टेटिस्टीशियन (Statistician)
(४०) डिप्टी कलेक्टर
(४१) कलेक्टर
(४२) सिपाही
(४३) संगीतकार
(४४) चित्रकार
(४५) कोई अन्य व्यवसाय

IX. वे लोग जिनके साथ आप खाली समय में रहना पसन्द व नापसन्द करते हैं :—

(१) अपने से बड़ी लड़कियां
(२) अपने से बड़े लड़के
(३) अपने से छोटी लड़कियां
(४) अपने से छोटे लड़के
(५) बराबर के लड़के
(६) बराबर की लड़कियाँ
(७) मां
(८) पिता
(९) दूसरे व्यक्ति जन
(१०) कोई साथी न हो
(११) छोटे बच्चे
(१२) अध्यापक या अध्यापिकायें

X. स्कूल व कालेज के बाद की शिक्षा संस्थाओं की पसन्द :—

(१) ट्रेनिंग स्कूल (Training School)
(२) विश्वविद्यालय (यूनीवर्सिटी)
(३) कला स्कूल (Art School)
(४) सिलाई कढ़ाई का स्कूल
(५) मेडिकल कालेज (Medical College)
(६) इन्जीनियरिंग कालेज
(७) ला कालेज
(८) वायुयान सम्बन्धी स्कूल

XI. वैयक्तिक विशेषताएँ (Personal Characteristics)

(१) प्रायः हर समय प्रसन्नचित्त
(२) आत्म-विश्वासी
(३) नर्वस
(४) जल्दबाज

(५) शान्त क्रियाओं को पसन्द करने वाले

(६) आसानी से खुश हो जाने वाले

(७) बेचैन

(८) छोटी-छोटी बातों पर शीघ्र ही नाराज हो जाने वाले

(९) दुःखी

(१०) पार्टी या पार्टीज (समुदाय) को नापसन्द करना

(११) मित्रों में सर्वप्रिय

(१२) लोगों में और उनके कामों में रुचि लेना

(१३) दूसरों के साथ अच्छी तरह से काम करना

(१४) पार्टी या दूसरी सामाजिक क्रियाओं में आनन्द लेना

(१५) अक्सर एकाकी अनुभव करना

(१६) अत्यन्त कोमल स्वभाव वाला

(१७) एक अच्छे मस्त रहने वाले समझे जाने हैं

(१८) उद्धत

(१९) दूसरों की अपेक्षा अधिक नम्र

(२०) पहनावे, सजावट में सुन्दर रुचि है

(२१) उदार और निःस्वार्थ समझे जाने हैं

(२२) आपके विचार मौलिक हैं

(२३) किसी कार्य को आरम्भ करने की मान्य क्षमता है

(२४) कला, संगीत, लेखन में चतुर

(२५) निर्देश का आसानी से पालन करने हैं

(२६) सुन्दर वस्तुओं से आनन्दित होने हैं

(२७) मन अच्छी तरह से एकाग्र कर लेने हैं

(२८) नई वस्तुओं को जानने के उत्सुक हैं

(२९) उदार

(३०) औसत से अधिक अनुभवी

(३१) चतुर

(३२) न्याय संगत प्रवृत्ति

(३३) मशीनी कार्यों में कुशल

(३४) वैज्ञानिक रुचि वाले

(३५) व्यवहारिक

(३६) धीमे पर निश्चयात्मक विचारक

(३७) सहज में ही बात कर सकते हैं

(३८) निश्चयकर विचारों को अच्छी तरह से व्यक्त कर सकने हैं

(३९) समय के पाबन्द

(४०) द्रुतगति से कार्यों को समाप्त करने हैं

(४१) देर तक एक काम को करना पसन्द करते हैं

(४२) क्रम सफाई में करने हैं

(४३) खाली समय लाभदायक काम में लगाते हैं

(४४) आगे के लिए योजना बनाने हैं

(४५) काम करने में लगन

(४६) कालेज के काम और क्रियाओं के शौकीन हैं

(४७) कुछ विषयों में कठिनाई अनुभव करने हैं

(४८) औसत व्यक्ति से अधिक अंक प्राप्त करने हैं

(४९) कुछ अध्यापकों के संग कठिनाई अनुभव करने हैं

(५०) अध्ययन करना पसन्द करने हैं

(५१) अपने कालेज में नेता किस्म समझे जाने हैं

(५२) पढ़ने में मुग्न हैं

(५३) नींद अच्छी आती है

(५४) जल्दी थक जाने हैं

(५५) बार बार सिर दर्द होता है

(५६) बार बार जुकाम हो जाता है

(५७) बीमारी के कारण साधारणतयः कालेज से अनुपस्थित हो जाने हैं

(५८) बहुत सी सब्जियां नहीं खा सकने

(५९) दूसरों से अधिक शक्तिशाली हैं

(६०) कलाबाजी आसानी से कर सकने हैं (Can do athletic stunts easily)

(६१) एक अच्छे नर्तक या नर्तकी समझे जाने हैं

(६२) अक्सर बुरे स्वप्न आने हैं

(६३) माता पिता के विचारों में मतभेद है

(६४) घर में ज्यादा रहने में खुश रहने हैं

(६५) भाई बहिनों के साथ ठीक तरह से रहते हैं

(६६) आपके माता पिता समझदार व हमदर्द हैं

(६७) घर पर अक्सर मित्रों का सत्कार करते हैं

(६८) माता पिता की आज्ञा मानने हैं

(६९) औसत कुटुम्ब से अधिक अच्छा कुटुम्ब है

(७०) दूसरों की अपेक्षा अधिक यात्रा की है

APPENDIX C2

INTEREST INVENTORY

शिक्षा-विभाग—प्रयाग विश्वविद्यालय
व्यक्तित्व और रुचि अनुसूची

सूचना पत्र

नाम································· उम्र······· कक्षा······· स्त्री/पुरुष···· दिनांक··················

घर का पता·························· स्कूल व कालेज ·······························

I. क्रियायें :—

पसन्द	नापसन्द
१··································	१··································
२··································	२··································
३··································	३··································

II. खेल-कूद :—

पसन्द	नापसन्द
१··································	१··································
२··································	२··································
३··································	३··································

III. स्कूल विषय :—

पसन्द	नापसन्द
१··································	१··································
२··································	२··································
३··································	३··································

IV. पुस्तकों की किस्में :—

पसन्द	नापसन्द
१··································	१··································
२··································	२··································
३··································	३··································

V. पिछले दो वर्षों में पढ़ी गई किताबें

१························ ···············

२························ ···············

३························ ···············

VI. पत्रिकायें

१························ ···············

२························ ···············

३························ ···············

VII. दैनिक समाचार पाठन :—

क्या आप अक्सर दैनिक समाचार पत्र पढ़ते हैं ?····· ·· ।

कौन सा ?

आपको कौन सा भाग सब से अच्छा लगता है ?····· ।

VIII. भावी व्यवसाय :—

१··························

२··························

३

IX. वे लोग जिनके साथ आप खाली समय में रहना पसन्द करते हैं :—

पसन्द   नापसन्द

१..............................   १...

२..............................   २...

३..............................   ३...

X. स्कूल व कालेज के बाद की शिक्षा संस्थाओं की पसन्द :—क्या आप वर्तमान कक्षा पास करने के बाद पढ़ाई जारी रखना चाहते हैं ?...........यदि ऐसा है तो किस प्रकार के स्कूल व कालेज में जाना पसन्द करेंगे ? ....

....

XI. वैयक्तिक विशेषताएँ :—

वे जो कि आप में पाई जाती हैं ।   वे जो आप में नहीं हैं ।

१..............................   १...

२..............................   २...

३..............................   ३...

४..............................   ४...

५..............................   ५...

६..............................   ६...

७..............................   ७...

८..............................   ८...

९..............................   ९...

१०.............................   १०..

XII. यदि आपको सब से ज्यादा पसन्द की चीज़ माँगने को कहा जाय तो क्या माँगेंगे ?

....

XIII. आपकी सब से बड़ी समस्या क्या है ? ....

....

XIV. आप किस चीज़ से सब से ज्यादा डरते हैं ? ....

....

XV. आप रात में स्वप्न में क्या देखते हैं ? ....

....

APPENDIX D

SENTENCE COMPLETION TEST

शिक्षा-विभाग—प्रयाग विश्वविद्यालय
वाक्य-पूर्ति

दिनांक   ....   स्त्री/पुरुष

कृपया निम्नलिखित वाक्यों को जितनी जल्दी हो सके पूरा करें । आपको सब वाक्यों को पूरा करना है ।

१. मेरा स्कूल का काम .... ।

२. भविष्य .... ।

३. मैं जानना चाहती/चाहता हूँ कि .... ।

४. हमारा कुटुम्ब .... ।

५. ट्रेनिंग .... ।

६. अधिकांश समय .... ।

७. अक्सर धन .... ।

८. अगर मैं .... ।

९. काम करना .... ।

१०. मैं .... पीड़ित हूँ ।

११. मित्रगण .... ।

१२. मेरी मां .... ।

१३. ऐसा भी होता है .... ।

१४. खाना .... ।

१५. मेरा मन .... ।

१६. मैं .... सोती/सोता हूँ ।

१७. मेरी सब से बड़ी इच्छा .... ।

१८. ईश्वर .... ।

१८. मेरी कल्पना .... ।

२०. अधिकतर लड़के (आदमी) .... ।

२१. मेरे कपड़े .... ।

२२. हम लोगों के कानून .... ।

२३. मुझे .... डर लगता है ।

२४. मेरी सब से बड़ी परेशानी ....

२५. जीविका पैदा करना ··· ··· ··· ··· ··· ··· ··· ··· ···

२६. मेरे बहुत से स्वप्न ··· ··· ··· ··· ··· ··· ··· ···

२७. छिपे तौर से मैं ··· ··· ··· ··· ··· ··· ··· ··· ···

२८. मेरा पेट ··· ··· ··· ··· ··· ··· ··· ··· ··· ···

२९. मेरी समझ में नहीं आता कि कौन सी बात मुझे ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ···

३०. अधिकतर लोग ··· ··· ··· ··· ··· ··· ··· ··· ···

३१. मेरे पिता ··· ··· ··· ··· ··· ··· ··· ··· ··· ···

३२. धर्म ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ···

३३. मेरा सब से खराब ··· ··· ··· ··· ··· ··· ··· ···

३४. मैं चहता ··· ··· ··· ··· ··· ··· ··· ··· ···

३५. मेरा बचपन ··· ··· ··· ··· ··· ··· ··· ··· ···

३६. व्यर्थम हत्या ··· ··· ··· ··· ··· ··· ··· ··· ···

३७. मुझे ··· ··· ··· ··· ··· ··· ··· ··· ईर्ष्या होती है।

३८. रात में ··· ··· ··· ··· ··· ··· ··· ··· ··· ···

३९. मेरी मुखाकृति ··· ··· ··· ··· ··· ··· ··· ··· ···

४०. अंधकार ··· ··· ··· ··· ··· ··· ··· ··· ··· ···

४१. मेरी सब से बड़ी चिन्ता ··· ··· ··· ··· ··· ··· ···

४२. जब मैं ··· ··· ··· ··· ··· ··· ··· ··· ··· ···

४३. लड़ना झगड़ना ··· ··· ··· ··· ··· ··· ··· ··· ···

४४. बच्चे ··· ··· ··· ··· ··· ··· ··· ··· ··· ···

४५. मेरा स्वास्थ्य ··· ··· ··· ··· ··· ··· ··· ··· ···

४६. मुझे ··· ··· ··· ··· ··· ··· ··· पर सब से अधिक अभिमान है।

४७. साधारणतय: लड़कियाँ ··· ··· ··· ··· ··· ··· ···

४८. मृत्यु ··· ··· ··· ··· ··· ··· ··· ··· ··· ···

४९. मेरी सब से बड़ी अभिलाषा ··· ··· ··· ··· ··· ···

५०. मुझे ··· ··· ··· ··· ··· सब से अधिक पसन्द है।

५१. मेरी आदतें ··· ··· ··· ··· ··· ··· ··· ··· ···

५२. मैं ··· ··· ··· ··· ··· कोशिश करता/करती हूँ।

५३. मेरे जीवन में प्यार ··· |

५४. मुझे ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· प्रसन्नता होती है।

५५. मेरी अध्यापिकाऍं (मेरे अध्यापक) ··· |

५६. मुझे अफसोस है ··· |

५७. घर पर ··· |

५८. मुझे कष्ट होता है ··· |

५९. अक्सर मैं सोचती/सोचता हूँ ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· |

६०. मैं परेशान हो जाती/जाता हूँ ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· |

६१. मेरा सिर ··· |

६२. कोई नहीं ··· |

६३. मैं ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· लज्जित हूँ।

६४. मेरी शिक्षा ··· |

नीचे जो कुछ भी महत्त्वपूर्ण ज्ञात होता है लिखें।

नाम ···

जन्म की तारीख ··· ··· ··· ··· ··· ··· ··· ··· ··· उम्र ··· ··· वर्ष ··· ··· माह ··· ··· ··· ···

स्कूल व कालेज की जो परीक्षा पास की है ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ··· ···

स्कूल व कालेज का नाम ···

वर्त्तमान व्यवसाय ···

मिलनसार, साथ अध्ययन करना, स्वभाव अच्छा, कला में अच्छा, औठों पर सदा मुस्कान, देखने में अच्छा, लोगों का मददगार, निष्कपट, सर्वप्रिय, क्रियाशील, अध्ययनशील, उदार, सहायतापूर्ण, साथ पढ़ रहे हैं, चरित्र अच्छा है, समय पर सहायता, एक ही शहर, एक ही जाति, अच्छा स्पोर्ट्समेन, स्वस्थ्य शरीर, किसी बात से कभी न डरना, स्वच्छ रहना, फोटोग्राफी, संगीत में रुचि, साथ रहना, पढ़ने में अच्छा नहीं, परिश्रमी, एक ही हौस्टल, एक ही विषय, एक ही प्रान्त, पहले से जान पहचान, एक दूसरे के प्रति उदार, सद्व्यवहार, सीधा सादा, उसकी सहायता से सेकेन्ड डिवीजन मिला, क्लास कट करना, मेरे प्रति अच्छा, अच्छी सलाह देना, चलचित्र देखना, कला में दोनों ठीक, बुरी चीजें प्रयोग में न लाना, पढ़ने में सहायता, क्लास फैलो, मदद करता है, लड़कियों को छेड़ना, स्वभाव एक सा, सुख दुख में बराबर व्यवहार, ग्रामीण निवासी, संगीत में रुचि, स्वास्थ्य में रुचि, पुराने परिचय, एक सी पसन्द, संगीत में भाग लेना, आज्ञाकारी, घर के नज़दीक रहता है, काम की चीजें देते हैं, साथ घूमने जाते हैं, मुहल्ले में रहना, चरित्र अच्छा होना, सुशील, सत्यवादी, पढ़ने में एक सा, सीट पास, अध्ययनशील स्वभाव, बातचीत का ढंग, सज्जन, सहपाठी, पढ़ने में मदद, किताबें दे देना, हंसी मज़ाक, घूमना पसन्द, खेलकूद में रुचि, टेस्ट मैच की कमेंट्री सुनना, पढ़ने में तेज, सहायता करना, हर अच्छे बुरे कार्य में सहायक, अमीरों से नफरत, देश प्रेम, सिनेमा में केवल न्यूज़ रील देखना, सहायता मिलना, घर की मित्रता, घर में आना जाना, अच्छा आदमी, कठिनाइयों के समय सहायता, सम्पूर्ण कार्य स्वयं करना, महत्वपूर्ण कार्यों में भाग लेना, माता पिता का कहना मानना, पटती है, एक दूसरे की चीज ले जा सकते हैं, साथी, मेल जौल से रहते हैं, किताबें देना, हाई स्कूल से साथ पढ़ना, स्वभाव मिलता जुलता है, साथ बहुत दिन व्यतीत किए, मुसीबत के समय सहायता, मकान मालिक का साला, सच्चा, ईमानदार, नेक दिल, अच्छा खिलाड़ी, साथ अध्ययन करना, चोरी न करना, सहायता करना, व्यवहार अच्छा, मन में ऐसी बात नहीं जिससे लड़ाई हो, झूठ बोलना, ताकतवर, घरवालों से जान पहचान, परिवार अच्छा, जान पहचान अच्छे लड़कों से, धार्मिक प्रवृति, एक दूसरे की जरूरत में काम आना, हर तरह से सहायता करने को तैयार, परिश्रमी, काफ़ी अच्छे, बुरी आदतें नहीं, दुश्चरित्र नहीं, अध्यापकों का आदर करना, बड़ों का आदर करना, सुन्दर व्यवहार, घर का पड़ोसी, मन की बात नहीं छिपाता, हर समय ऐसी बात करना जिससे दोनों प्रसन्न रहें, हम दोनों ही निष्कपट, दोनों का आचरण बहुत सुन्दर, व्यवहार ठीक, सीधा, खराब आदतें नहीं, हमेशा साथ देता है, काम हल हो जाता है,

पैसे से दोस्ती, सब दुनियादारी, एक दूसरे का काम करने को तत्पर, सभी आवश्यकताओं की पूर्ति करते हैं, हमारे प्रति विश्वास है, कर्तव्य परायण, निष्ठावान, हमारे उपयुक्त, स्वभाव से स्वभाव मिलता है, तीव्र बुद्धि के, हर समय मदद, वक्त पर काम आना, कपटता का व्यवहार नहीं, ज्ञान बढ़ाने की बातें सोचता है, निःस्वार्थ, सच्चा मित्र, बुरे व्यवहार की बात नहीं करता, बुरा काम करने से रोकना, जो कहते हैं मान जाता है, म्युचुअल हैल्प, परेशानी दूर करता है, ज्यादा इधर उधर की बात नहीं करते, कपट का समावेश नहीं, कर्तव्यों को समझता है, मित्र के दुख में हिस्सा बंटाता है, हमेशा साथ देता है, बहुत कम बोलना, कभी कभी बात का बुरा मान जाना, बकवास करना, सादा जीवन व्यतीत करना, भावनाएं एक सी, मनोवृत्ति एक सी, कुल कपट नहीं, सहयोगी, विचार मिलते हैं, बहुत ही प्रसन्नचित्त, साथ रहने पर मन बहलाव होता है, शरीर में जोश आता है, दिमाग की थकावट दूर होती है, चिन्तनशील, आचरण निष्ठ, एक दूसरे को दिल देकर रहना, मेरे ही कद के, चित्रकला में दोनों की रुचि, खेल कूद में रुचि, सिनेमा जाने में साथ, कहीं भी जाने में साथ, अच्छी सलाह देता है, जरूरत की चीज मिल जाती है, एक दूसरे को चाहते हैं, बचपन से साथ पढ़ते हैं, साथ साथ पढ़ना, साइकिल दे देते हैं, शांति, घर से संबंधी, आर्थिक सहायता, साथ घूमना, हर बात में साथ देना, साथ खेल, माता पिता की सेवा करते हैं, विश्वासी, परोपकार की भावना, उदार, संकोची स्वभाव, स्वभाव कोमल, दामाशील, मिलनसार, कार्यशील, अत्यधिक सरल स्वभाव, हमारे हित में तत्पर, एक दूसरे जैसे गरीब, सादा जीवन अच्छा विचार, रिश्तेदार, हमेशा शान्त, दयालु, सहिष्णु, कर्मशील, विवेकी, प्रेम निष्कपट, मुसीबत में सहायता, रुचि एक सी, बहुत दिनों से सम्पर्क, वादा पूरा करते हैं, आदर्शवादी, वरचुअस, उत्तम चरित्र, भावनाएं बहुत कुछ मिलती हैं, दिल एक हो गया है, जो जीवन का रास्ता अपनाया है अनुकरणीय है, बात बता देते हैं, दुर्गुण नहीं, चरित्रवान, स्वभाव के अच्छे, धर्म का पालन, उच्च जाति, समय नष्ट नहीं करते, एक दूसरे पर विश्वास, दोनों एक दूसरे से प्रेम करते हैं, समय पर साथ देते, पढ़ने में बाधा उपस्थित करना, सरल, इधर उधर की बातों में साथ, पढ़ाई के सिलसिले में दोस्ती, पटरी खाती है, विषय एक हैं, अच्छे गुण, गन्दी बातें बहिष्कृत, खुदगरज, क्रियाशील, स्पोर्ट्समेन, एक साथ भरती हुए, विचारों में समानता, संकट में मदद की, सच्चरित्र, बुद्धिमान, कर्तव्य परायण, उत्तम चरित्र, स्पोर्ट्स गुण, अच्छा आचरण, न्याय का पक्ष, स्टूडेंट यूनियन का प्रेसीडेंट, ब्रिलिएंट स्कॉलर, हर काम में रेगुलर, दोनों का इंटेलिजेंस एक सा, रुचि समान, सहायता में तत्पर, मृदु स्वभाव, सहानुभूति, गौरे, सच्चा सहायक, निःस्वार्थी, पढ़ने में चतुर, अच्छी संगति, बुरी भावनाएं नहीं ।

GIRLS

एक सा स्वभाव, एक से विचार, बहुत स्टूडियस, किताबों की सहायता, ह्यूमरस, परिश्रमी, सिम्पल लिविंग, सिंसियर, सीरियस, चोरी नहीं करती, साड़ी पहनती है, घुंघराले बाल, देखने में सुन्दर, दोनों शैतान हैं, घनिष्ट सम्बन्ध, वर्षों से जानते हैं, म्यूचुअल अंडरस्टैंडिंग, हैल्प फुल, सहनशील, अच्छा व्यवहार, हम दोनों एक दूसरे को लव करते हैं, एक तरह का व्यवहार, एक से विषय, गुड इन स्टडीज़, गुड नेचर, एक सा नेचर, सिम्पल लिविंग हाई थिंकिंग, वेरी कांइंड, झूठ नहीं बोलती, साथ देती है, फैशन ज़ नहीं करती, सभी उससे प्रसन्न हैं, घर में काम काज में सहायता देती है, काला रंग, सभी को आकर्षित करती है, गम्भीर, ड्रामा आदि में पार्ट लेती है, बहुत इंटेलीजेंट, लेसन्स याद करती है, अध्यापकों की आज्ञा का पालन करती है, लैबोरियस, स्वभाव मिलता है, हमारी घर की दशा जानती है, घर आना जाना है, अपनी मदद आप करती है, गुड लुकिंग, अच्छा चरित्र, अच्छा गाती है, अपना सा व्यवहार, फास्ट फ्रैन्ड, गुणी, अच्छी, खिलाड़ी, आर्टिस्ट, कृतज्ञ, एक से गुण, कान्वेंट से साथ, गुड इंग्लिश, ग्रेट फुल, लविंग, शाई, सिम्पल ड्रैस, विचार एक से, मित्रता को समझती है, सुशील, लम्बे बाल, पढ़ाई में सहायता, परिश्रमी, सत्य बोलना, बुरे कामों में नहीं पड़ेगी इसका विश्वास है, पढ़ने में अच्छी, स्कूल में साथ, छोटे से पढ़े, सर्वगुण सम्पन्न, लम्बी, दुबली पतली, विचार मिलने से मित्रता, एक दूसरे की बात का बुरा न मानना, घर पास, आपस में सहायता, काला रंग, रहन सहन, सरल स्वभाव, सबकी सहायता करना, सीधी, उच्च विचार, मुझसे प्रेम करती है, क्लास में सबसे अच्छी लड़की, क्लास में अच्छी, कभी कभी नाराज़ हो जाना, अच्छी लगती है, घमंडी नहीं, व्यक्तित्व एक सा, शान्त, हमें सब कुछ बता देती है, हाई फैमिली, सत्य बोलती है, बुद्धिमान है, काफी समानता, बहुत प्रसन्नचित, सर्वप्रिय, अच्छी लड़की, योग्य, पुरानी मित्रता, मेहनती, इमानदार, पढ़ने में अच्छी, पढ़ने में सहायता, समारोह में पार्ट लेती, कोई भी चीज दे देती है, अखबार पढ़ती है, सादी ड्रैस, समय की पाबन्द, में उसे पसन्द करती हूं, बहुत परिश्रमी, मीठा बोलती है, पूर्ण निपुण, सहयोगी, अपने विचार बता देती है, बहुत सी सहायता, सरस, तेज़, हर कला में निपुण, गुस्सा नहीं आता, दूसरों को छेड़ना, व्यवहार अच्छा, समान दृष्टि, विशाल हृदय, हंसमुख, शेखचिल्ली हमारी तरह, मिलकर मज़ाक उड़ाना, अहंकार नहीं, एक दूसरे से सलाह लेते हैं, साथ ही आनन्द उठाते हैं, शील स्वभाव, सब काम में होशियार, शुरू से साथ पढ़े, एक दूसरे की मदद, चंचल, हर काम में सहायता, घनिष्ट मित्र समझती है, विश्वासपात्री,

स्पोर्ट्स में कमज़ोर, हर एक के साथ अच्छा व्यवहार, सुन्दर, कठिनाई में सहायता, मज़ाकिया, खेल में इनाम जीतती है, साथ रहते हैं, दोनों की एक राय, आदतों से प्रसन्न हैं, अध्ययनशील, नम्र, पढ़ने में तेज, सहानुभूति, स्नेह, काम में सहायता, अध्यापिकाओं के प्रति अच्छा व्यवहार, आचार विचार एक से, एक सी उम्र, मुझे पसन्द है, हमेशा साथ, जरूरत के समय मददगार, गलत काम पर समझाती है, नृत्य व गाने में अच्छी, सद्व्यवहार, अनुपस्थित होने पर स्कूल का काम बताती है, देखने में साधारण, धोखा नहीं देती, सुन्दर, योग्यता, गुण, विचारों की अच्छी, सभी कलाओं में प्रवीण, क्लास में ध्यान लगाती है, स्वजातीय, गाने की शौकीन, जाली, गुण विद्यमान, विनम्र, चुगलखोर नहीं, मित्रतापूर्ण व्यवहार, पढ़ने में परिश्रमी, दो चोटी, धनिष्ठ, क्लास फेलो, लापरवाह नहीं, सुशील, मीठे वचन बोलती है, कोमल स्वभाव, पड़ोसी, खूबसूरत, रिश्तेदारी, अच्छी डिवीजन से पास होती है, सबको समान दृष्टि से देखती है, चरित्र अच्छा, रुचि समान, एक दूसरे की मदद, घर आती है, आवश्यकता पड़ने पर मदद करती है, चुपचाप रहती है, पढ़ाई में मदद, एकान्त पसन्द, एक साथ काम कर लेते हैं, हमेशा पढ़ने की बात करती है, सबसे मेल से रहती है, शरीफ लड़की, छल नहीं, हर कार्य में सहायता ।

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